

INTERGENERATIONAL RELATIONSHIPS BETWEEN
TRAUMA, DISSOCIATION, AND EMOTION

by

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The purpose of this study was to investigate intergenerational relationships between trauma, dissociation, and emotion. Short and long term consequences of betrayal trauma on cognitive and emotion coping strategies in a sample of 67 mother-child dyads were explored. Group comparison, correlation, and regression strategies were used to examine relationships between the following variables: maternal and child trauma histories, maternal and child dissociation, maternal alexithymia, and child emotion coping strategies in response to distressful events.

Experiences of high betrayal trauma were found to be related to higher levels of dissociation in both children and mothers. Furthermore, mothers who experienced high betrayal trauma in childhood and were subsequently interpersonally revictimized in adulthood were shown to have higher levels of dissociation than a group of mothers who had experienced high betrayal trauma in childhood but were not revictimized in

adulthood. This may indicate that dissociation from a history of childhood betrayal trauma involves a persistent unawareness of future threats in the environment.

Additional evidence consistent with this hypothesis was found. Maternal revictimization status was related to child interpersonal trauma history, suggesting that a dissociative unawareness for threats may extend to children. More generally, an association was found between maternal interpersonal trauma history and child interpersonal trauma history.

Maternal dissociation was also predictive of maternal alexithymia. This relationship was examined because mothers high in alexithymia were hypothesized to display deficits in emotion socialization that could put their children at greater risk for dissociation. Evidence consistent with a relationship between maternal alexithymia and child dissociation was found. Furthermore, a significant association between maternal alexithymia level and child emotion coping strategy was revealed. Children with highly alexithymic mothers displayed higher levels of passive emotion coping strategies on a task assessing their reactions to a distressful parent-child event.

This study provides evidence that the experience of parental trauma has intergenerational effects on children. It is an important first step towards longitudinal studies that can provide additional clarification of the nature of the relationships between these variables, as well as parent-child intervention studies that may help to prevent child trauma exposure and reduce symptomatology.

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CHAPTER I

INTRODUCTION

Overview

The experience of trauma perpetrated by a parent or close other is an overwhelming experience for a child. In an effort to cope, the child must learn strategies to deal with his or her emotions that may be adaptive in the trauma context yet maladaptive in other settings. By examining dissociative tendencies and emotion regulation skills in children affected by trauma, one goal of the current study was to elucidate child trauma adaptation mechanisms. Another goal of the current study was to understand the ways in which maternal experience of trauma may contribute to child trauma and child adaptation to trauma. If mothers have had the experience of trauma, they may show high levels of dissociation and alexithymia. This experience may result in impairments in maternal ability to protect the child from trauma, as well as impairments in the way the mother supports the child emotionally following a traumatic experience.

In the following literature review, I will discuss the development of emotional competence in the child and its basis in the parent-child relationship. I will then discuss how trauma perpetrated by a parent or close other (i.e., betrayal trauma) may cause

dysregulation of emotion-related processes, creating the experience of dissociation.

Dissociation has been found in children as a consequence of betrayal trauma, and has also been found to persist in adults as a long-term consequence. Alexithymia, which involves difficulties identifying and describing emotions in the self as well as in others, is thought to be another long-term consequence of childhood trauma. I will conclude the literature review by addressing how trauma-related deficits in parental socialization of emotion might affect how the child copes with emotions in the face of trauma.

Emotion Development and Early Parent-Child Relations

Emotional competence has been defined broadly as “an understanding of one's own and others' emotions, the tendency to display emotion in a situationally and culturally appropriate manner, and the ability to inhibit or modulate experienced and expressed emotion and emotionally derived behavior as needed to achieve goals in a socially acceptable manner” (Eisenberg, Cumberland, & Spinrad, 1998, p. 242). In order to achieve emotional competence, the child must learn how to regulate his or her emotions during difficult events.

Emotions function as part of an internal monitoring system that appraises both positive and negative events, and motivates intrapersonal and interpersonal behavior (Cummings & Davies, 1996; Shipman & Zeman, 2001a). In early childhood, infants have a limited repertoire with which to regulate distress and discomfort. They quickly learn emotion signaling as a social interaction strategy which elicits specific maternal responses (Cole, Martin, & Dennis, 2004). Thus, parents function directly as external

regulators of child emotions. Over time, a process of mutual regulation develops between mother and child (Gianino & Tronick, 1988). The infant's response helps the mother determine the level of stimulation to give the child, and both work towards "achieving a synchronous and pleasant state" (DeOliveira, Bailey, Moran, & Pederson, 2004, p. 443).

These types of experiences with the caregiver contribute to the development of a particular maternal-infant attachment pattern. Attachment patterns are organized by the child's internal working models, or cognitive templates, of the self and caregiver (Ainsworth, 1985; Bowlby, 1977). Children who have received contingent and responsive care develop a secure attachment to their caregivers (Alexander & Anderson, 1997). Their internal working model of the self may include being loved, effective, autonomous and competent, while other people are seen as available, cooperative, and dependable (Cassidy, 1994). Children with secure attachments tend to have access to a range of emotions as well as effective emotion regulatory strategies (Alexander & Anderson, 1997).

Infants with *insecure* attachments have had a history with their caregiver in which emotion signals were ignored (*insecure-avoidant*) or were responded to in an insensitive or inconsistent manner (*insecure-ambivalent*). Infants with an *insecure-avoidant* style adopt strategies in which they minimize their emotions. Main and Solomon (1986) suggest that *insecure-avoidant* children are minimizing attention to the attachment relationship, which allows them to maintain proximity to the caregiver, despite feeling anger at being rejected by them (Cassidy, 1994). Suppression of this anger allows them

to avoid alienation and being rejected further. The idea of anger suppression is supported by research by Spangler and Grossman (1999), who measured heart rate during the Strange Situation attachment task. They found more distress in avoidant infants than in secure infants, although the outward affect of the avoidant infants was masked. Infants with an *insecure-ambivalent* style tend to heighten their emotions with the caregiver rather than minimize them. It is suggested that with inconsistent parenting they have learned the need to increase bids for attention (Cassidy, 1994).

A majority of children who have experienced maltreatment show *disorganized* attachments to their abusive caregiver (Cook et al., 2005). Disorganized attachment has been defined by van IJzendoorn and colleagues (1999) as “the breakdown of an otherwise consistent and organized strategy of emotion regulation” (p. 226). Infants with a disorganized attachment utilize a combination of extreme minimizing or maximizing emotion strategies (Mikulincer, Shaver, & Pereg, 2003). In addition to such contradictory behavior patterns, they display disorganization, disorientation, and confusion (Hesse & Main, 2000). Infants who are maltreated by a parent thus appear to lack a coherent attachment strategy to decrease anxiety and increase their sense of security; they are unsure of whether to gain emotional or physical proximity to the caregiver (Cassidy, 1994).

***Dysregulation of Emotion-Related Processes:
Dissociation as a Consequence of Betrayal Trauma***

Emotion regulation has been defined as any change associated with activated emotions, including changes in the emotion itself, such as intensity and duration, as well as changes to associated physiological processes (Cole et al., 2004). Emotion *dys*regulation may occur in children as they adapt to a difficult situation. Dysregulation includes interferences with how emotional information and events are processed, a lack of control over emotional experience and expression, and difficulties with flexible responsiveness to environmental changes (Bridges, Denham, & Ganiban, 2004; Cole, Michel, & Teti, 1994). The attachment behaviors described above, in infants who have insensitive or inconsistent caregivers, are examples of emotion dysregulation. Emotions therefore “serve protective and communicative functions even when they are creating risk or interfering with adaptive development” (Cole et al., 1994, p. 82).

Other examples of dysregulation include overregulated and constrained emotion patterns (associated with internalizing behavior), or underregulated and impulsive emotion patterns (e.g., externalizing behavior). Cole and colleagues (1994) note that such emotion dysregulation should not be confused with a lack of emotion regulation. Although dysregulation contributes to negative social functioning, it often occurs in response to an emotionally arousing situation. Dissociation is one example of dysregulation that is hypothesized to protect the child from overwhelming emotion resulting from caregiver abuse (Cole et al., 1994). Indeed, dissociation and disorganized

attachment both stem from a failure to maintain a coherent self-organization when faced with inappropriate caregiver behavior (Kobak et al., 2006).

Dissociation is defined in the DSM-IV as “a disruption in the usually integrated functions of consciousness, memory, identity, or perception of the environment,” (American Psychiatric Association, 2000). Disturbances in perception and consciousness include difficulty distinguishing between fantasy and reality, entering trance states, and feelings of depersonalization. Memory disruptions include amnesia for the traumatic incident. Disturbances in identity may be manifested by the development of separate personalities or segregated views of self. These dissociative disruptions are thought to result from the compartmentalization of distressing emotions and memories (e.g., Liotti, Solomon, & George, 1999; Lyons-Ruth, 2003; McLewin & Muller, 2006; Peterson & Putnam, 1994; Putnam, 1997; Sanders, 1992). Although dissociation may help the child within an abusive context, dissociative processes may interrupt other areas of functioning, interfere with developmental milestones, and contribute to additional psychological disorders (Putnam, 1997).

Many researchers have conceptualized dissociation as a defensive response to trauma (e.g., Liotti et al., 1999; Lyons-Ruth, 2003; McLewin & Muller, 2006; Peterson & Putnam, 1994; Putnam, 1997; Sanders, 1992). Betrayal Trauma Theory (Freyd, 1994; Freyd, 1996) posits that dissociation is most likely to occur when a trauma is perpetrated by someone with whom the victim has a close relationship. In the case of child maltreatment, betrayal trauma theory suggests that a child who is dependent on his/her parent learns to dissociate the experience of parental betrayal and abuse from conscious

awareness, in order to maintain an attachment to that parent. Research has shown that exposure to traumas high in betrayal is significantly associated with dissociation (e.g., DePrince, 2005; Freyd, DePrince, & Zurbriggen, 2001; Freyd, Klest, & Allard, 2005).

Several studies have identified a link between the experience of maltreatment and heightened levels of dissociation in children. Macfie and colleagues have conducted research that explores dissociation in early childhood (Macfie, Cicchetti, & Toth, 2001a, 2001b). In one study (2001a), they found that preschool-aged children who experienced sexual abuse or physical abuse showed more dissociation than a nonmaltreated comparison sample. Although neglected children did not show this difference, both abused and neglected children in the study showed significant increases in dissociation levels over a one-year period, suggesting that early maltreatment has extended effects on dissociation. In another study of preschool-aged children (Macfie et al., 2001b), the authors found that abused and neglected children demonstrated significantly more dissociation than nonmaltreated children and that severity and chronicity of maltreatment were associated with dissociation.

Hulette, Freyd, Pears, Kim, Fisher, and Becker-Blease (2008) found that maltreated preschool-age children in foster care had a significantly higher mean level of dissociation as compared to children who were not maltreated. Furthermore, the highest dissociation level was found in a profile of children who had experienced moderate-to-high severity physical abuse with emotional maltreatment and neglect. In a second study, Hulette, Fisher, Kim, Ganger, and Landsverk (2008) found that preschool-aged children who experienced multiple forms of maltreatment were more likely to be dissociative.

The findings from these studies are in accord with betrayal trauma theory (Freyd, 1996), as children experiencing different kinds of abuse may have a greater need to be dissociative in order to preserve a relationship with caregivers.

Examining the cognitive aspects of dissociation, Becker-Blease, Freyd, and Pears (2004) found that abused preschool-aged children with high levels of dissociation showed impaired recognition memory for threat-related pictures in a divided attention condition compared to a group of non-abused/low dissociation children. This finding suggests that the experience of betrayal trauma by a caregiver leads to the development of dissociative attentional strategies to keep threatening information out of awareness.

Betrayal trauma seems to have longitudinal effects, as dissociation is also found among older children (e.g., Putnam, 1997; Silberg, 1998). Sim and colleagues (2005) examined dissociation in a sample of 4 to 12 year old children, and determined that children with a history of sexual abuse had significantly higher levels of dissociation than a normative sample. In a prospective longitudinal study, Ogawa, Sroufe, Weinfeld, Carlson, and Egeland (1997) measured dissociation at a number of different developmental stages. They found that maltreatment predicted dissociation across developmental periods (i.e., infancy, preschool, elementary school, adolescence, and young adulthood).

Dissociation is also present in adult survivors, as a long-term consequence of betrayal trauma. Many studies have established an association between Dissociative Identity Disorder and reports of severe abuse in childhood (e.g., Coons, Bowman, & Milstein, 1988; Loewenstein & Putnam, 1990; Putnam, Guroff, Silberman, Barban, & et

al., 1986; Ross, Anderson, Fleisher, & Norton, 1991). Furthermore, research has demonstrated higher rates of dissociation specifically in victims experiencing childhood abuse by a trusted adult versus childhood abuse by other individuals, providing further support for betrayal trauma theory. For instance, Chu and Dill (1990) found that subjects with a history of childhood abuse generally reported high levels of dissociation, but subjects abused by family members had significantly higher scores than those abused by non-family members. Similar results have been found in other studies. Leahy, Pretty, and Tenebaum (2004) found that those who had been sexually abused by a perpetrator with whom there was trust, guardianship or authority had higher dissociation scores than did other victims of sexual abuse.

Deficits in Threat and Social Violation Awareness

Research has also shown high levels of revictimization among survivors of childhood betrayal trauma (e.g., Cloitre, 1997; Messman-Moore, 2000; Sandberg, 2001). Such findings suggest that dissociation leads to long-term difficulties identifying threats in the environment. DePrince (2005) performed a study examining the association between dissociation and revictimization using the Wason Selection Task (Cosmides, 1989; Stone, Cosmides, Tooby, Kroll, & Knight, 2002), which tests subjects' ability to detect violations of conditional rules. The Wason Selection Task includes the following three types of problem sets: abstract rules, social contract rules involving examples of social exchange, and precautionary rules involving safety. Generally, people tend to make fewer errors on social contract and precautionary rule problems than on those

involving abstract rules (Cosmides & Tooby, 1992, 1997). According to Cosmides and colleagues, this finding indicates support for an evolutionary perspective. They argue that it is beneficial for humans to be able to detect “cheaters” (i.e., those who violate social contracts) and to be able to detect hazards in unsafe situations. However, Freyd (1996) suggests that individuals with a betrayal trauma history may be less likely to detect “cheaters,” as they had learned in the past to be unaware of such violations in their own relationships. Findings from the DePrince (2005) study validated this suggestion. DePrince found that adults with a childhood betrayal trauma history and who were also revictimized after age 18 made significantly more errors on social contract and precautionary rule problems than a group who did not report revictimization. Furthermore, pathological dissociation predicted errors on these problem sets.

This research by DePrince (2005) supports the idea of dissociation as a mechanism by which revictimization of childhood abuse survivors occurs in adulthood. It also suggests that when adults with a betrayal trauma history become parents, high levels of dissociation may contribute to an unawareness of dangers in the environment that can affect their children. Chu and DePrince (2006) found that children with a betrayal trauma history had mothers with higher numbers of betrayal traumas versus children with no such history. The authors explain this finding by suggesting that maternal dissociation leads to difficulties monitoring children.

Based on the research reviewed above, it is possible that dissociative parents with a betrayal trauma history could have difficulty screening perpetrators who come into children’s lives, thus exposing their children to trauma. It is also possible that parental

dissociation and lack of awareness for social rule violations leads parents to perpetrate child abuse themselves. Regarding the possibility of parental perpetration, Egeland and Susman-Stillman (1996) suggest that the dissociative compartmentalization of thoughts, emotions, and behaviors may allow a parent to maltreat without empathy for the child. They found that abusive mothers with a history of childhood maltreatment showed higher dissociation than non-abusive mothers with a history of childhood maltreatment.

Trauma, Dissociation, and Alexithymia

While dissociation involves disruptions to cognitive processes, occurring in response to overwhelming emotions, the experience of emotion itself may be affected. Emotional numbing often occurs in conjunction with dissociation, and has been considered to be part of the dissociative construct (Foa & Hearst-Ikeda, 1996; Spiegel, 1997). Terr (1991), among other early clinicians of dissociation, observed that dissociative children had difficulty defining and experiencing emotion. Numbing is thought to be a way of reducing or avoiding the distress associated with trauma (Foa & Hearst-Ikeda, 1996). According to Goldberg and Freyd (2006), betrayal trauma may lead to both cognitive dissociation and emotional numbing, as individuals feel the need to detach themselves from maltreatment perpetrated by a close other while still behaving in ways that maintain the necessary attachment.

Several researchers have found an association between dissociation and the experience of alexithymia (Berenbaum & James, 1994; Elzinga, Bermond, & van Dyck, 2002; Grabe, Spitzer, & Freyberger, 2001; Sayar & Kose, 2003). Alexithymia has been

defined as a difficulty with identifying and describing one's own feelings and the maintenance of a cognitive style characterized by a focus on external rather than internal events (Parker, Bagby, Taylor, Endler, & Schmitz, 1993). Although alexithymia is seen as an impairment with an individual's ability to recognize his/her own emotions, it has been associated with extensive deficits in the ability to recognize emotions in others (Lane et al., 1996; Lane, Sechrest, Riedel, Shapiro, & Kaszniak, 2000; Mann, Wise, Trinidad, & Kohanski, 1994; Parker, Taylor, & Bagby, 1993). If an individual experiences betrayal trauma, necessitating the use of dissociation and emotional numbing strategies, it follows that impairments to emotion recognition in the self as well as in others could occur.

Both dissociation and alexithymia have been conceptualized as a disruption in the perception of emotion that help trauma survivors deal with overwhelming or difficult affective states (Sayar & Kose, 2003). Elzinga and colleagues (2002) suggest that alexithymia results from the persistence of detachment and numbing symptoms that follow childhood trauma. It is therefore possible that dissociation may in fact contribute to the development of alexithymia. Irwin & Melbin-Helberg (1997), who found that the alexithymic construct of difficulty identifying feelings was significantly related to dissociation, suggest that dissociation is a mechanism by which traumatized individuals "become alexithymic" to deal with trauma-related affect (p. 164). Grabe and colleagues (2000) and Berenbaum and James (1994) also found a strong association between alexithymia and dissociation. However, several studies have not found this link (Sayar & Kose, 2003; Wise, Mann, & Sheridan, 2000; Zlotnick et al., 1996), which suggests that

alexithymia may result from different factors and that dissociation does not necessarily precede it.

Nevertheless, similar to dissociation, research suggests that traumatic experience is one pathway to the development of alexithymia (Berenbaum, 1996; Goldsmith & Freyd, 2005; Zlotnick, Mattia, & Zimmerman, 2001). A meta-analysis by Frewen et al. (2008) shows that individuals with posttraumatic stress disorder (PTSD) have more difficulty identifying and describing emotions than those without PTSD. Zlotnick, Mattia, and Zimmerman (2001) found that among individuals with PTSD, early emotional and physical neglect was specifically related to higher alexithymia levels. Based on Linehan and Kehrer's (2003) theory on the development of emotion dysregulation, Zlotnick and colleagues discuss that emotional neglect may include a failure by the caregiver to "teach the child how to label emotions with words, to discriminate his or her own and others' emotions, and to trust his or her own emotional responsiveness as valid interpretations of events" (Zlotnick et al., 2001, p. 186). Goldsmith and Freyd (2005), who found a significant association between alexithymia and childhood emotional abuse, suggest that children learn it is unacceptable to show negative emotions and therefore distance themselves from their feelings in order to cope.

This idea is supported by the research literature. Lumley, Mader, Gramzow, and Papineau (1996) showed a link between alexithymia and the presence of dysfunctional family affective involvement (i.e., over- or under-involvement). Berenbaum and James (1994) found that alexithymia was associated with feeling emotionally and physically unsafe during childhood and with being discouraged from expressing emotions.

Furthermore, they determined that high alexithymia was related to low levels of positive family communication while high dissociation was related to higher negative family communication. In this study, dissociation and alexithymia were found to be correlated; thus the constructs may be related yet distinct (Berenbaum & James, 1994).

The studies reviewed above suggest that childhood familial emotional experiences are important in the development of alexithymia. Dysfunctional affective expression and communication by family members, including emotional abuse/neglect by a parent, are among the possible etiological factors. If children feel unsafe in their homes and are not able to express emotions appropriately, it may lead to persistent emotion dysregulation.

Furthermore, the presence of alexithymia in parents has been found to be significantly associated with alexithymia in children (Fukunishi & Paris, 2001; Yelsma, Hovestadt, Nilsson, & Paul, 1998). The link between alexithymia in parents and their offspring might be explained by caregiver insensitivity and unresponsiveness to child affective cues. Fukunishi and colleagues (1999) revealed that the experience of low maternal care in childhood was related to later difficulty describing feelings. This particular aspect of alexithymia has also been shown to strongly predict interpersonal problems (Spitzer, Siebel-Jurges, Barnow, Grabe, & Freyberger, 2005), which suggests a problem for the parent-child relationship. If alexithymic parents do not communicate emotion appropriately in social interaction, it could influence their children's emotional development.

***The Importance of Parental Socialization in
Preventing Emotion Dysregulation in Children***

Although the attachment relationship established in infancy is the foundation for the development of emotion regulation, parents continue to play a role in assisting children with regulating affect throughout childhood. Because alexithymia involves deficits in identifying, describing, and recognizing emotion in oneself and others, parents high in alexithymic characteristics may be unable to adequately scaffold the child's emotional development.

Parental experience of emotion, and parental ability to regulate reactions to emotional situations, contribute to how emotion is socialized in children (Denham, Bassett, & Wyatt, 2007). It is in this way that the child learns about the salience of particular emotions, and which reactions to emotions are acceptable. Denham, Bassett, and Wyatt (2007) discuss that frequency of a particular type of parental emotion and parental reactions to that emotion influence children's experience and expression of emotion. For example, positive emotional expression in parents has been found to be significantly related to positive expression in children (Isley, O'Neil, Clatfelter, & Parke, 1999). Isley and colleagues (1999) also found that the prevalence of negative emotions in parents relates to negativity in their children. These patterns have been found in other research as well (e.g., Denham, Mitchell-Copeland, Strandberg, Auerbach, & Blair, 1997; Snyder, Stoolmiller, Wilson, & Yamamoto, 2003). Denham and colleagues (2007) suggest that parents who are not very emotionally expressive do not give adequate information about emotion to the child. To our knowledge, there are no studies examining the emotion socialization process

in parents high in dissociation or alexithymia, but given that parental emotional states indirectly teach the child about the significance of daily events and related behavior, this is an important area of research.

In addition to indirect emotion socialization learned through observation, direct parental emotion socialization is critical to developing the child's emotion-related skills (Denham et al., 2007). Direct parental emotion socialization includes teaching the child about emotion, such as explaining what causes emotions, verbally labeling how the child or others are feeling, and discussing ways to handle emotions (Gottman, Katz, & Hooven, 1996; Saarni, 1999; Shipman & Zeman, 2001a). Direct socialization has been shown to be related to positive child social functioning, as children learn to identify and predict others' behaviors. For example, Eisenberg, Fabes, and Murphy (1996) showed that children's positive social interactions with peers were associated with maternal problem-focused reactions to emotion (i.e., support and encouragement of children's attempts to deal with negative events). Children's constructive coping was also related to maternal ability to react in a problem-focused manner. In contrast, maternal reactions that minimized or punished children's emotions were associated with avoidant coping and lowered social functioning in children (Eisenberg, Fabes, & Murphy, 1996). Other researchers have found similar findings, such that children who expect negative or unsupportive responses appear more likely to suppress negative responses (e.g., Eisenberg et al., 1998; Shipman & Zeman, 2001b).

This type of direct parental emotion socialization can be described using the concept of meta-emotion (Gottman et al., 1996). Meta-emotion refers to the idea that

parents have a set of thoughts and feelings about their own emotions and their children's emotions. According to meta-emotion theory, there are two overarching categories of parents: those with an emotion-coaching (EC) philosophy, and those with an emotion-dismissing (ED) philosophy. EC parents are aware of both positive and negative emotions in themselves and in their children, and are able to discuss them in a differentiated fashion. They act as an "emotion coach" for their children in distressful situations, helping them to both recognize and regulate these experiences. In contrast, ED parents seem less able to differentiate between low intensity emotions. They also feel that negative emotions are harmful to the child. Gottman and colleagues (1996) note that ED parents therefore may ignore negative emotions, or dismiss them as something to "get over." While some of these ED parents intend to be helpful, others openly criticize children's negative emotions.

Evidence for positive emotion regulation outcomes for children with EC parents versus ED parents has been found. Gottman, Katz, and Hooven (1996) classified a sample of parents as EC or ED when children were 5 years old, and measured differences three years later. Children with EC parents demonstrated higher physiological regulatory skills and less problem behaviors. Lunkenheimer, Shields, and Cortina (2007) found that parental ED philosophy was a risk factor for poorer emotion regulation (e.g., emotional lability, internalizing and externalizing symptoms) in middle childhood, while parental EC philosophy was related positively to child outcomes. Interestingly, these associations were present only after partialing out the number of emotion words spoken by the family (Lunkenheimer et al., 2007). The authors discuss previous research by Dunn, Brown, and

Beardsall (1991) that shows that the amount of parent–child emotion talk is related to emotional competence (Lunkenheimer et al., 2007). Lunkenheimer and colleagues therefore suggest that although parental meta-emotion philosophy is important, it is the proportion of EC or ED emotion talk that may be the crucial determinant. Returning to the concept of alexithymia, these findings may provide support for the idea that an inability to talk about emotions could affect parental ability to support the child emotionally following trauma, leading to poorer child coping.

Deficits in Emotion Socialization Related to Parental Alexithymia

Generally, researchers have found that individuals high in alexithymia have deficits in accurately identifying relational affective cues. They have difficulty with both nonverbal and verbal affective cues, including decreased competence in identifying emotional facial expressions in others (Mann et al., 1994; Parker, Taylor et al., 1993) and the ability to match emotional sentences, emotional words, and emotional facial images (Lane et al., 1996; Lane et al., 2000). McDonald & Prkachin (1990) found that those high in alexithymia show deficits in the ability to pose anger and happiness and deficits in producing spontaneous negative emotional facial expressions. Generally, the clinical literature describes a paucity of facial emotion expression in alexithymic individuals (for a review, see Taylor, Bagby, & Parker, 1997), which is problematic, as children's recognition of emotion has been associated with mother's facial emotion expressiveness (Camras et al., 1990). In a sample of expectant mothers, Tenedios (2007) found that difficulty in identifying one's own feelings was significantly related to the ability to

accurately identify infant facial expression, suggesting that alexithymic parents may be unable to interpret their child's emotional signals. As discussed earlier, the parent plays a critical role as an external regulator of emotion in infants, which sets the stage for the development of self-regulatory strategies. If the parent cannot interpret child emotional signals, he/she will not be able to adequately scaffold the child during times of stress.

Parental alexithymia may therefore affect whether the child can maintain an integrated self in the face of traumatic events. If children have a preexisting difficulty with emotion identification and regulation, dissociative disruptions in the processing of emotional information, and related difficulties in coping with emotion, are likely to occur following trauma.

Deficits in Emotion Socialization in Maltreating Parents

There have not been a great deal of studies on direct socialization of emotion with regard to trauma and maltreatment (Shipman, Schneider, & Sims, 2005), and thus this is another area important for research. In terms of teaching about emotion, Shipman and Zeman found that physically abusive parents engage in less discussion of emotional states with their children, and abused children correspondingly demonstrate less emotion understanding (1999).

Shipman and Zeman (2001a) performed another study in which they interviewed physically maltreating and nonmaltreating mother-child dyads about child emotion expression management, child emotion coping strategies, and child expectations for how parents might react following a display of emotion. The authors used a series of happy,

sad, and angry vignettes in which the mother was the central figure causing an emotional event. Children, aged 6 to 12 years old, were asked a series of questions based on the hypothetical experience of situations similar to those in the vignettes, including whether they would show how they felt about the situation to their mothers, how their mothers would feel or what their mothers would do if they showed their emotions, and what the children would do to feel better in the situation. Vignettes were also presented to the abusive mothers in the study, who were asked similar questions about their children's responses. The authors found that abused children were less likely to display angry and sad emotions to their mothers. Abused children also expected less maternal support for angry emotional displays and chose less effective strategies for coping with their anger. Abusive mothers showed overall less understanding of emotional displays and were less likely to provide effective emotion management strategies for their children (Shipman and Zeman, 2001).

Other research on maltreating parents suggests generalized deficits in the parental capacity to understand and respond to child emotions. For instance, it appears that abusive mothers may find infant emotion signals aversive. In a study by Frodi and Lamb (1980), both abusive and non-abusive mothers who were shown video of a crying infant showed high levels of physiological reactivity. However, maltreating mothers reported annoyance, a lack of sympathy, and were found to have greater increases on heart rate and skin conductance measures. Abusive mothers also reported being significantly less willing to interact with a baby who was smiling and cooing. Furthermore, they showed heightened physiological arousal in this positive affect condition compared to non-

abusive mothers, who did not show increases in arousal (Frodi & Lamb, 1980). It therefore appears that maltreating mothers may experience difficulty with both negative and positive infant expression of emotions.

Abusive mothers may also show problems distinguishing between lower intensity emotional expressions. Butterfield & Ridgeway (1993) revealed deficits in affect perception in a sample of mothers at-risk for maltreatment. At-risk mothers who were asked to identify feelings from a series of infant facial pictures chose fewer overall emotion categories than a control group, and tended to choose labels like “anger” or “joy” rather than low-intensity emotion words such as “interested” or “worried.” This finding suggests that parents may have difficulties teaching about a variety of distinct emotional states.

It is also important to understand how nonmaltreating parents of traumatized children show deficits in emotion socialization. Shipman, Zeman, Penza, and Champion (2000) explored maternal support of emotional displays in sexually maltreated girls aged 6 to 12. Maltreated girls in the study had been abused by their fathers or other paternal figures. Findings indicated that the maltreated girls expected less support from mothers in response to anger and sadness displays than the nonmaltreated girls, and additionally experienced increased parental conflict after displays of negative emotion. Mothers of maltreated girls also reported higher levels of child emotional lability and negativity than mothers of nonmaltreated girls. In sum, these nonmaltreating mothers of sexually abused girls perceived greater negative emotionality in their children yet were less supportive. It may be that maternal capacity to provide support is impaired due to the nature of the

traumatic event, or perhaps other factors such as maternal trauma history, maternal relationship to the perpetrator, or maternal psychopathology play a role.

If children cannot use engagement with a caretaker as a strategy to decrease negative emotions, this may reduce their experience of emotion or lead to otherwise problematic dysregulation of emotion. Gaensbauer and Hiatt (1984) found that physically abused/neglected infants showed a lack of positive affect alongside high levels of negative emotional expression. Beeghly and Cicchetti (1996) examined the lexicons of 30 month old maltreated toddlers, and found that they were overall less likely to use words that refer to internal states and specifically used fewer words referring to negative affect. In addition, maltreated children may fail to develop effective emotion regulation strategies. Extensive research has shown that internalizing and externalizing behavior problems are prevalent in maltreated children (see Shipman, Schneider, & Brown, 2004, for a review). As discussed previously, dissociation is one example of an emotion dysregulation strategy common among maltreated children.

Study Hypotheses

Based on the review of the literature, a cross-sectional study was planned to examine associations between trauma, dissociation, alexithymia, and emotion coping in a sample of parents and children. This study was conceptualized as an initial stage of research to examine the nature of these associations, in order to determine the feasibility of longitudinal studies and intervention designs that can better target causal mechanisms for trauma and its consequences. In the current study, separate sets of hypotheses were

developed regarding children with histories of betrayal trauma and parents with histories of betrayal trauma. Parenting effects were also expected on child outcomes, and a set of hypotheses pertaining to the parent-child relationship were therefore created. Group comparison and regression strategies were planned for the following hypotheses.

Child Hypotheses

- 1.1 Based on Betrayal Trauma Theory, it was expected that children who experienced traumas high in betrayal would have higher levels of dissociation than children who did not experience high betrayal traumas.

Parent Hypotheses

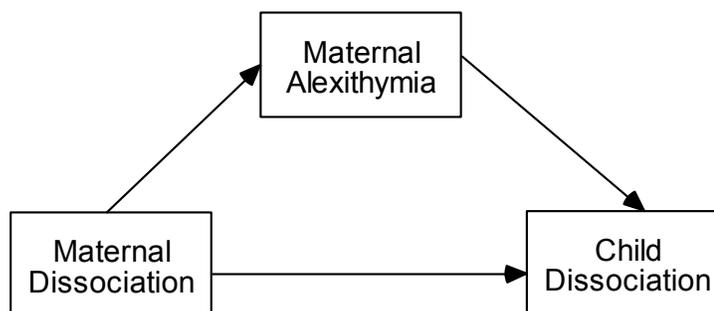
- 2.1 Based on Betrayal Trauma Theory, it was expected that mothers who experienced traumas high in betrayal would have higher levels of dissociation than mothers who did not experience high betrayal traumas.
- 2.2 The group of mothers who experienced high betrayal trauma in childhood and then experienced interpersonal traumas perpetrated against them in adulthood (i.e., were revictimized) will have higher levels of dissociation than mothers who were not revictimized in this way, providing support for the theory that dissociation stemming from childhood trauma may lead to deficits in awareness for future interpersonal threats in the environment.
- 2.3 As dissociation and alexithymia have both been conceptualized as a disruption in the perception of trauma-related emotional states, dissociation was

hypothesized to be positively related to alexithymia in the mothers in the sample.

Parent-Child Relationship Hypotheses

- 3.1. Children's history of trauma was hypothesized to be related to their mother's history of trauma.
- 3.2. Children of revictimized mothers were expected to be more likely to experience interpersonal traumas than children of non-revictimized mothers. This was hypothesized because high levels of maternal dissociation may contribute to an unawareness of threatening individuals in the environment, leading to child trauma exposure (see also Hypothesis 2.2).
- 3.3. Maternal alexithymia was expected to contribute to child dissociation, and to partially mediate an association between maternal dissociation and child dissociation. The mediational model (shown in Figure 1) is theory-based, although we are limited by the cross-sectional design of the study. The following hypotheses are described in the model:
 - (a) Maternal dissociation will be related to child dissociation, as we expect maternal dissociation may lead to child trauma (see also Hypothesis 3.2).
 - (b) Maternal dissociation was hypothesized to predict maternal alexithymia (see also Hypothesis 2.3).
 - (c) As maternal alexithymia has been associated with problems in children's affect development, it will contribute to child dissociation.

Figure 1. Mediational Model of Intergenerational Effects on Child Dissociation



- 3.4. Children with mothers high in alexithymia will be more likely to report using passive, rather than active, emotion coping strategies in relation to distressful events than those who have mothers low in alexithymic characteristics. This finding was expected because children of highly alexithymic parents may be less well socialized to effective emotion coping behaviors.
- 3.5. Children who have experienced traumas high in betrayal will be more likely to report using passive emotion coping strategies in relation to distressful events than (a) children experiencing traumas with lesser or no betrayal and (b) children who reportedly did not experience trauma. This profile of coping was expected because children with high betrayal trauma may be more dissociative and thus likely to use passive emotion coping strategies, and because research has shown that maltreatment in the family is associated with deficits in maternal emotion socialization.

CHAPTER II

METHOD

Participants

This study involved original data collection, completed at the University of Oregon. Data were collected using the Developmental Database (a database of families who were listed in the local birth register), posted fliers in the community, and electronic messages on websites and listserves (e.g., Trauma Network email list, Craigslist). Participants were given a small monetary reimbursement and the children received a toy for their time. The study began in Spring 2007 with a general recruitment of families with children aged 7-8, requesting participation from “children and parents who have, or have not, experienced stressful life events.” Due to a lack of child participants with trauma histories, we selectively sampled for a more targeted sample of families with 7-8 year old children who had experienced traumatic life events during the second phase of recruitment beginning in Spring 2008. Data collection was completed in Spring 2009.

Seventy-five children and their caregivers initially participated in the study. Data from eight families were excluded from analyses as the participating caregivers were not their biological mothers, resulting in a final sample size of 67 mothers and their children. Fathers were excluded because much of the literature reviewed has focused on the

biological mother, and research has suggested that the paternal role in socializing emotion may be distinct from the maternal role (Cassano, Perry-Parrish, & Zeman, 2007). Adoptive parents were excluded due to possible differential effects on child outcomes.

The age group of the children (7 to 8 year olds) was chosen because of the importance of examining children's coping skills as they enter middle childhood. Limited research on the effects of parental emotion socialization has been done with children in this stage; much of the literature has focused on infants and preschool-aged children (Denham et al., 2007; Klimes-Dougan & Zeman, 2007). However, it is a critical period for study. Children in this age group are beginning to place more emphasis on peer friendships and establish greater autonomy (Cassano et al., 2007). As they encounter new social challenges with peers, they must be able to regulate emotions effectively (Lunkenheimer et al., 2007). Finally, by this age, the history of the parent-child relationship is well-established. Children have been exposed to a particular profile of emotion expressivity by parents, and have learned certain expectations regarding reactivity to emotion.

There were 36 boys and 31 girls in the sample. Families in the study identified the following ethnic backgrounds: 53 European-American, 4 Hispanic, 3 Native American, 1 Asian, and 5 "other" (all of whom reported mixed heritage). Two families who declined to give information about ethnicity. Approximately 66% of families reported incomes at or below \$30,000, 28.4% of families reported incomes higher than \$30,000, and 4 families declined to give this information. Parents in the study ranged in

age from 26 to 50 years old ($M = 35.8$, $SD = 6.1$). All parents reported completing high school or the equivalent; approximately 82% reported additional years of education.

Measures

Trauma History

Trauma histories of parent and child were assessed using the Brief Betrayal Trauma Survey (BBTS) and the Brief Betrayal Trauma Survey – Parent Report (BBTS-Parent). Due to the sensitive nature of the data, it was stressed to adults during data collection that no identifying information would be linked to any of the information provided. The BBTS (Goldberg & Freyd, 2006) is a 14-item self-report inventory of adult trauma experiences and the BBTS-Parent (Becker-Blease, Freyd et al., 2004) is a 12-item caregiver-report measure of traumatic events that were experienced by the parent's child. These measures have shown good test-retest reliability and indicate trauma exposure rates that are similar to those found by other measures (Goldberg & Freyd, 2006).

Events endorsed on the BBTS and the BBTS-Parent include traumatic experiences with a higher degree of betrayal (“high betrayal trauma” or HBT) and traumatic experiences with either a lesser degree of betrayal or no betrayal (“lesser betrayal trauma” or LBT). In this study, the experience of traumas perpetrated by someone “very close” to the individual was classified as HBT. The experience of traumas perpetrated by someone “not close,” witnessed interpersonal traumas, and non-interpersonal traumas were classified as LBT. BBTS and BBTS-Parent items were

classified in this way based on guidelines established by Freyd (2008). Table 1 describes the items from the BBTS that comprise the HBT and LBT categories and Table 2 describes this categorization on the BBTS-Parent.

For both adults and children, data were coded for the experiences of HBT and LBT. Participants were then placed into the HBT category if they endorsed any experience of events high in betrayal, even if they had also experienced traumas lower in betrayal. Individuals reporting only traumatic experiences of lesser betrayal or no betrayal were placed into the LBT category. Finally, individuals who did not report any trauma were categorized in the “no trauma” group, or NT. This hierarchical classification style is similar to other systems that categorize child maltreatment subtypes (e.g., Manly, Cicchetti, & Barnett, 1994).

Among the mothers in the sample, 53 reported the experience of HBT, 7 reported only LBT, and 7 reported NT. This sample was highly traumatized, perhaps due to the selective sampling completed during the second phase of recruitment. Regarding the children in the sample, parents reported that 21 had experienced HBT, 25 had experienced only LBT, and 21 had experienced only NT.

Note that on the BBTS, mothers were asked whether they had experienced traumatic events in childhood and in adulthood. Because only five mothers reported the experience of high betrayal in adulthood without the experience of high betrayal in childhood, and no differences were found on the outcomes of interest, these groups were combined and overall betrayal trauma was reported for most analyses, except where indicated.

Table 1. BBTS Categorization of Maternal Traumatic Events

High Betrayal Traumas (HBT)	<i>Percent of sample endorsing item</i>
You were made to have some form of sexual contact, such as touching or penetration, by someone with whom you were very close (such as a parent or lover).	40.3%
You were deliberately attacked so severely as to result in marks, bruises, burns, blood, or broken bones by someone with whom you were very close.	37.3%
You were emotionally or psychologically mistreated over a significant period of time by someone with whom you were very close.	74.6%
Lesser Betrayal Traumas (LBT) <i>*including non-interpersonal traumas</i>	<i>Percent of sample endorsing item</i>
You were made to have such sexual contact [touching or penetration] by someone with whom you were not close.	30%
You were deliberately attacked that severely [so severely as to result in marks, bruises, burns, blood, or broken bones] by someone with whom you were not close.	19.4%
You were emotionally or psychologically mistreated over a significant period of time by someone with whom you were not very close.	14.9%
Witnessed severe trauma on someone with whom you were very close.	27%
Witnessed someone with whom you were not so close undergoing a similar kind of traumatic event.	40.3%
Witnessed someone with whom you were very close deliberately attack another family member so severely as to result in marks, bruises, blood, broken bones, or broken teeth.	30%
Witnessed someone with whom you were not so close deliberately attack a member of your family	19.4%
*Experienced the death of one or more of your children	1.5%
*Been in a major earthquake, fire, flood, hurricane, or tornado that resulted in significant loss of personal property, serious injury to yourself or a significant other, the death of a significant other, or the fear of your own death.	31.3%
*Been in a major automobile, boat, motorcycle, plane, train, or industrial accident that resulted in similar consequences.	37.3%

Note. Participants who endorsed the item “Experienced a seriously traumatic event not already covered in any of these questions,” which is not listed above, were placed in the HBT or LBT categories depending on the description on the event.

Table 2. BBTS-Parent Categorization of Children's Traumatic Events

High Betrayal Traumas (HBT)	<i>Percent of sample endorsing item</i>
Your child was made to have some form of sexual contact, such as touching or penetration, by someone with whom your child was very close (such as a parent, caregiver or relative).	3%
Your child was deliberately attacked so severely as to result in marks, bruises, burns, blood, or broken bones by someone with whom your child was very close.	4.5%
Your child was emotionally or psychologically mistreated over a significant period of time by someone with whom your child was very close (such as a parent or caregiver).	23.9%
Lesser Betrayal Traumas (LBT) <i>*including non-interpersonal traumas</i>	<i>Percent of sample endorsing item</i>
Your child was made to have such sexual contact [touching or penetration] by someone with whom your child was not close	6%
Your child was deliberately attacked that severely [so severely as to result in marks, bruises, burns, blood, or broken bones] by someone with whom your child was not close.	3%
Witnessed someone with whom your child was very close (such as a parent, brother or sister, caretaker, or intimate partner) committing suicide, being killed, or being injured by another person so severely as to result in marks, bruises, burns, blood, or broken bones.	13.4%
Witnessed someone with whom your child was not so close undergoing a similar kind of traumatic event.	14.9%
Witnessed someone with whom your child was very close deliberately attack another family member so severely as to result in marks, bruises, blood, broken bones, or broken teeth.	21%
*Experienced the death of a sibling or parent	3%
*Been in a major earthquake, fire, flood, hurricane, or tornado that resulted in significant loss of personal property, serious injury to your child or someone your child was close to, the death of someone your child was close to, or the fear of your child's own death.	14.9%
*Been in a major automobile, boat, motorcycle, plane, train, or industrial accident that resulted in similar consequences.	13.4%

Note. Participants who endorsed the item "Experienced a seriously traumatic event not already covered in any of these questions," which is not listed above, were placed in the HBT or LBT categories depending on the description on the event.

Dissociation

The Dissociative Experiences Scale (DES) is a 28-item adult self-report measure that provides information regarding a continuum of dissociative experiences (Carlson & Putnam, 1993). Each type of experience on the DES is assessed according to how often it occurs, on a scale of 0% to 100% that is divided into ten percent increments (Ellason, Ross, Mayran, & Sainton, 1994). The total score is obtained by averaging the items. The DES is used as a screening instrument, with scores over 30 suggestive of pathological dissociation (Carlson & Putnam, 1993). The DES has been shown to have good overall psychometric properties including reliability, construct validity, and discriminant validity (Carlson & Putnam, 1993; Carlson, Putnam, Ross, Torem, & et al., 1993; van Ijzendoorn & Schuengel, 1996).

Parents reported on their children's level of dissociation using the Child Dissociative Checklist (CDC), a 20-item caregiver-report measure (Putnam, Helmers, & Trickett, 1993) on which symptoms of child dissociation are rated over the prior 12 months on a three-point scale (0 = not true, 1 = somewhat true / sometimes true, 2 = very true). The total score is obtained by summing responses to the items; scores over 12 may indicate pathological dissociation (Putnam, 1997). The CDC shows good test-retest stability and internal consistency, as well as good convergent and discriminant validity (Putnam et al., 1993; Putnam & Peterson, 1994). See Appendix for DES and CDC measures.

Alexithymia

The Toronto Alexithymia Scale (TAS-20; see Appendix for measure) was included to examine parental ability to identify and label emotions (Parker, Bagby et al., 1993). Alexithymia on the TAS-20 is assessed using a series of statements examining three factors: difficulty identifying emotions, difficulty describing emotions, and externally-oriented thinking. Each item contains a 1-5 Likert scale where higher scores indicate a greater degree of the alexithymic characteristic, except for those that are reverse scored. Items from all three factors contribute to a summed scale that measures the overall level of alexithymia. The TAS-20 has well established psychometric properties and has been shown to be a valid and reliable instrument in a variety of different populations, including community and international samples (Parker, Taylor, & Bagby, 2003; Taylor, Bagby, & Parker, 2003).

Emotion Coping Strategies

In addition to the parent-report measures described above, emotion coping strategies of children were examined based on their responses to two vignettes describing distressing events that occur in the context of a fictional mother-child relationship. The vignettes included in the study were adapted and revised from those described by Zeman and Garber (1996). The situation in the first vignette (labeled as “*Distressful-Self*”) centers on a distressing event generated by the child:

Emily made a special Mother’s Day project at school for her mom. On the way home from school, she accidentally dropped it in the mud and the card is ruined! She had been really looking forward to giving the project to her mom. How does Emily feel when she tells her mom?

The situation in the second vignette (“*Distressful-Parent*”) centers on a distressing event generated by the parent:

Emily is going to be in the school play. She told her mom about it and her mom was going to come. But on the day of the play, her mom is stuck in traffic and misses the whole thing. How does Emily feel?

Note that “Emily” was the name of the child in the vignettes when they were presented to a girl participant, and “Eric” was the name of the child in the vignettes when they were presented to a boy participant. If the participating child’s name was Emily or Eric, alternate names were used.

The larger study that was conducted in the lab included additional vignettes; however the particular vignettes described above were chosen based on the content of the distressing information. From the perspective of Betrayal Trauma Theory, it is possible that children may have different profiles of coping with events if the distress is generated by the child rather than the parent. Other studies have similarly chosen to examine only a relevant subset of vignettes from a larger group (e.g., Cassano et al., 2007).

Administration of the vignette tasks occurred as follows. A research assistant read each of the vignettes aloud to the child, being careful to mask affect. After each one was presented, children were asked to choose the primary emotion displayed by the fictional child, from among the following emotions: scared, sad, angry, ashamed, and happy. Children were also asked, “If this was you, and you wanted to make yourself feel better in this situation, what would you do?” Coding of free responses was based on the Emotion Management Interview – Child (EMIC) coding system (Shipman & Zeman, 2001a). The original EMIC coding system suggested that answers be coded as showing

effective or ineffective strategies; however, we adapted the system slightly to code strategies as Active or Passive:

Active strategy. Response that endorses an effective constructive strategy for coping with the emotionally arousing situation, including behavioral or cognitive distraction, seeking social support, and using an expressive behavior strategy. Active strategies include engaging the parent in a conversation about the distressing situation.

Passive strategy. Response that is passive, indicating no attempt to alter the situation (e.g., “I would just wait to feel better,” or “I would just forget it.”) Responses were also coded as passive if the child was unable to give an answer about the type of strategy he/she might use to feel better.

The author and a research assistant coded the data for active or passive strategies.

Interrater reliabilities were moderate to high: *Distressful-Self* vignette $\kappa = .74$,

Distressful-Parent vignette $\kappa = .84$.

CHAPTER III

RESULTS

This section will describe the analyses that were completed to test study hypotheses. In the first section, dissociation levels among children with different betrayal trauma histories will be discussed. The second section will provide an overview of results pertaining to maternal dissociation, revictimization, and alexithymia. The third section considers the impact of maternal trauma and related symptoms on child experience of trauma and dissociation. Finally, the last section examines how maternal alexithymia and child betrayal trauma may be related to children's coping strategies in other distressful situations.

Analyses of Child Sample

Child Hypothesis 1.1. Children who experienced traumas high in betrayal will have higher levels of dissociation than those without high betrayal trauma.

ANOVA was planned to test differences in dissociation between child trauma groups. Descriptive statistics were first examined (see Table 3). Six parents reported child dissociation scores of 12 and above (which is suggestive of pathology). Out of these six children, two children with scores of 12 and 13 were in the LBT group, and four

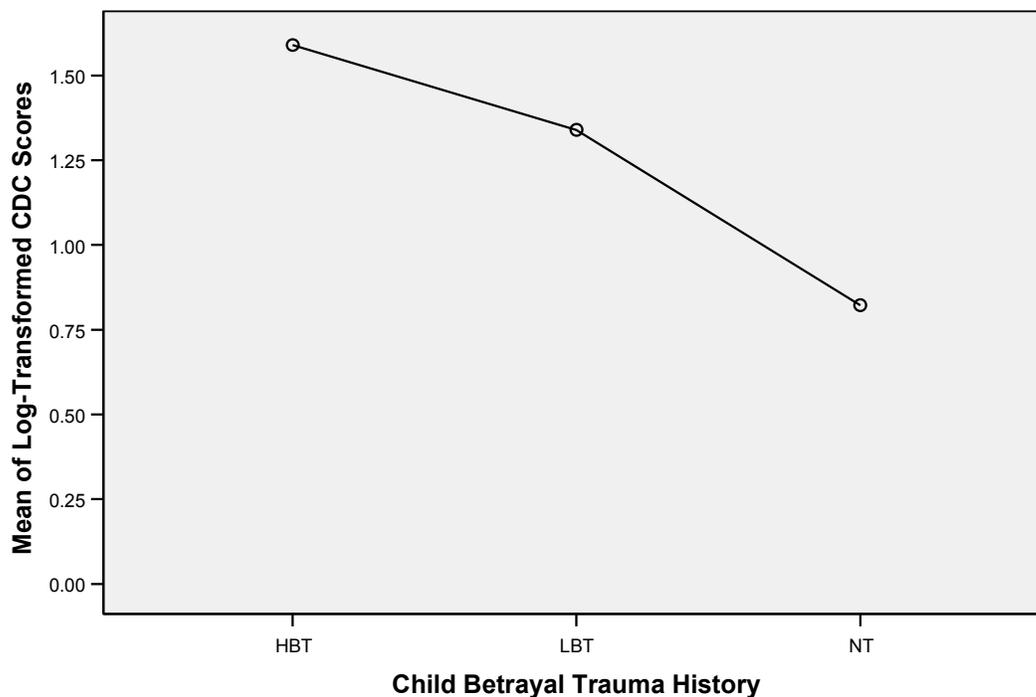
children with scores of 14, 15, 17, and 19 were in the HBT group. No children with scores of 12 or above were in the NT group. Within each of the trauma groups, a unimodal distribution of the dissociation variable was observed.

Table 3. Untransformed CDC Scores for Child Betrayal Trauma Groups

	<i>M</i>	<i>SD</i>	<i>n</i>	<i>Min - Max Score Range</i>
Betrayal Trauma History				
HBT	6	5.76	21	0 - 19
LBT	4.38	4.16	24	0 - 13
NT	2.09	2.6	22	0 - 10

Due to strong positive skew, Child Dissociative Checklist (CDC) scores were log transformed prior to analysis. The ANOVA found a significant omnibus effect, $F(2, 64) = 4.34, p = 0.02$, partial $\eta^2 = 0.12$, with the linear contrast also significant, $F(1, 64) = 8.27, p = 0.005$. The pattern of means in Figure 2 shows the highest dissociation level in the HBT group ($M = 1.59, SD = 0.92$), a decreased level in the LBT group ($M = 1.34, SD = 0.90$), and the lowest level in the NT group ($M = 0.82, SD = 0.80$). Posthoc contrasts using Tukey's HSD tests show that the HBT and NT groups were significantly different, $p = 0.02$. HBT and LBT groups were not significantly different from one another, $p = 0.61$. LBT and NT groups were also not significantly different, $p = 0.12$.

Figure 2. Dissociation Levels in Child Trauma Groups



Analyses of Parent Sample

Parent Hypothesis 2.1. Mothers who experienced traumas high in betrayal will have higher levels of dissociation than those without high betrayal trauma.

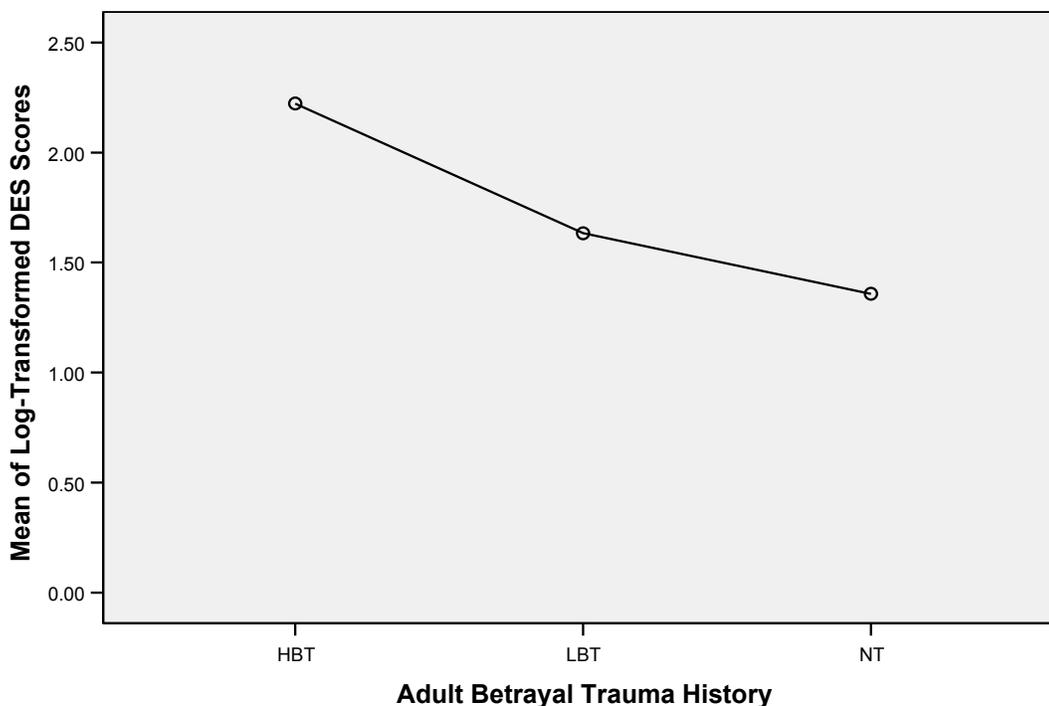
ANOVA was planned to test differences in dissociation between trauma groups. Descriptive statistics were first examined (see Table 4). Unequal cell sizes were found, as the majority of mothers had reported HBT. Within the HBT group, a unimodal distribution of the dissociation variable was observed. In addition, the two mothers who reported dissociation scores above the pathological score cutoff of 30 were in the HBT group.

Table 4. Untransformed DES Scores for Maternal Betrayal Trauma Groups

	<i>M</i>	<i>SD</i>	<i>n</i>	<i>Min - Max Score Range</i>
Betrayal Trauma History				
HBT	10.13	7.69	52	2 - 38
LBT	6.71	6.90	7	0 - 18
NT	3.14	1.57	7	1 - 6

Due to strong positive skew, Dissociative Experiences Scale (DES) scores were log transformed prior to ANOVA. The Welch approximation was used to account for unequal cell sizes and variances. The ANOVA showed a significant omnibus effect for adult dissociation level, $F(2, 10.44) = 12.61, p = 0.001$, partial $\eta^2 = 0.19$. Furthermore, the weighted linear contrast was significant, $F(1, 63) = 14.55, p < 0.001$. Figure 3 shows the pattern of means, in which dissociation scores were highest among those with HBT ($M = 2.22, SD = 0.60$), followed by LBT ($M = 1.63, SD = 1.04$), and NT ($M = 1.36, SD = 0.39$). Posthoc contrasts using Tukey's HSD tests show that the HBT and NT groups were significantly different, $p = 0.004$. HBT and LBT groups were marginally significant from one another, $p = 0.07$. LBT and NT groups were not significantly different, $p = 0.7$.

Figure 3. Dissociation Levels in Adult Trauma Groups



Parent Hypothesis 2.2. The group of mothers who experienced high betrayal trauma in childhood and were revictimized in adulthood will have higher levels of dissociation than mothers who were not revictimized.

The BBTS categories used in the above analysis combined reports of betrayal trauma experienced in childhood and adulthood to create overall HBT, LBT, and NT categories. However, we were also interested in the group of mothers in the sample who had experienced childhood HBT and then again experienced interpersonal traumas perpetrated against them in adulthood (i.e., were revictimized). It was hypothesized that this group of revictimized mothers might have higher levels of dissociation than mothers who were not revictimized.

Of the 67 mothers in the sample, 28 mothers who experienced HBT in childhood were revictimized in adulthood. Another 20 mothers had experienced HBT in childhood but were not revictimized in adulthood. Please see Table 5 for BBTS items used to determine revictimization status.

Table 5. BBTS Items for Categorizing Revictimization Status

BBTS items used to determine high betrayal trauma before age 18.
You were made to have some form of sexual contact, such as touching or penetration, by someone with whom you were very close (such as a parent or lover).
You were deliberately attacked so severely as to result in marks, bruises, burns, blood, or broken bones by someone with whom you were very close.
You were emotionally or psychologically mistreated over a significant period of time by someone with whom you were very close.
BBTS items used to determine revictimization status after age 18.
You were made to have some form of sexual contact, such as touching or penetration, by someone with whom you were very close (such as a parent or lover).
You were made to have such sexual contact by someone with whom you were not close.
You were deliberately attacked so severely as to result in marks, bruises, burns, blood, or broken bones by someone with whom you were very close.
You were deliberately attacked that severely by someone with whom you were not close.
You were emotionally or psychologically mistreated over a significant period of time by someone with whom you were very close.
You were emotionally or psychologically mistreated over a significant period of time by someone with whom you were not close.

Prior to conducting an independent samples t-test, descriptive statistics were examined (See Table 6); they revealed positive skew, unequal variances, and outliers. The t-test was therefore completed using log-transformed DES scores and an

accommodation for unequal variances, and two outliers in the non-revictimized group were excluded. DES scores were missing for one of the revictimized mothers.

Table 6. Untransformed DES Scores for Maternal Revictimization Groups

	<i>M</i>	<i>SD</i>	<i>n</i>	<i>Min - Max Score Range</i>
Maternal Revictimization Status				
Revictimized	11.41	8.53	27	2 - 38
Non-revictimized	6.72	2.4	18	3 - 11

Using log-transformed scores, the independent samples t-test revealed that revictimized mothers had a significantly higher mean dissociation score ($M = 2.31$, $SD = 0.66$, $n = 27$) than non-revictimized mothers ($M = 2.0$, $SD = 0.30$, $n = 18$), $t(39) = 2.10$, $p = 0.04$.

Parent Hypothesis 2.3. Dissociation will be positively related to alexithymia.

To examine this hypothesis, regression analyses testing the prediction of alexithymia from dissociation and an ANOVA testing differences in dissociation among mothers with high alexithymia versus low alexithymia were planned.

The regression model, testing dissociation as a predictor of alexithymia in the mothers in the sample, was significant, $F(1,64) = 20.11$, $p < 0.001$. The model provides a good fit (Adjusted $R^2 = 0.227$), with dissociation significantly accounting for 22.7% of variance in the alexithymia variable, $B = 0.822$, $t(64) = 4.484$, $p < 0.001$.

Because the literature suggests that dissociation may be related to particular aspects of the alexithymic construct, a series of regression models were additionally completed, testing dissociation as a predictor of each of the TAS subscales (i.e., difficulty identifying feelings, difficulty describing feelings, and externally-oriented thinking). Dissociation significantly predicted difficulty identifying feelings, $F(1,64) = 34.46, p < 0.001$, Adjusted $R^2 = 0.34$. Dissociation also significantly predicted difficulty describing feelings, $F(1,64) = 14.71, p < 0.001$, Adjusted $R^2 = 0.17$. Dissociation did not significantly predict an externally oriented thinking style, $F(1,64) = 0.83, p = 0.37$.

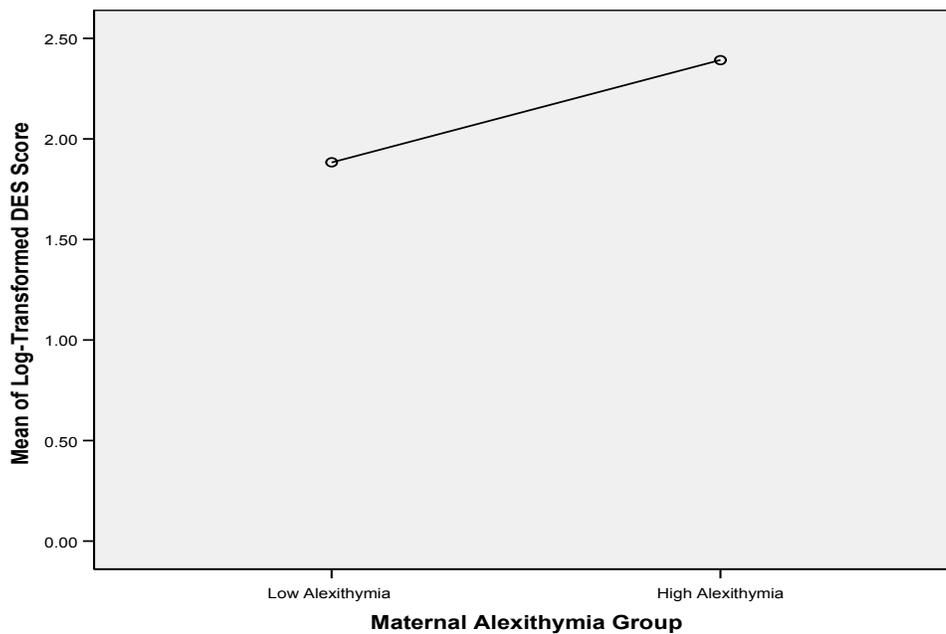
The data were next examined from a categorical perspective to test differences in dissociation among mothers with high alexithymia versus low alexithymia. Taylor, Bagby, & Parker (1997) have suggested that TAS-20 scores below 52 indicate low alexithymia, 52-60 indicate possible or borderline alexithymia, and scores above 60 indicate high levels of alexithymia. For this study, due to variable sample sizes, individuals with scores below 52 were categorized as having low alexithymia ($n = 42$) and individuals with scores greater than or equal to 52 were categorized as having high alexithymia ($n = 24$). Descriptive statistics for these groups can be found in Table 7.

Table 7. Untransformed DES Scores for Maternal Alexithymia Groups

	<i>M</i>	<i>SD</i>	<i>n</i>	<i>Min - Max Score Range</i>
Maternal Alexithymia				
High Alexithymia	13.42	9.79	24	0 - 38
Low Alexithymia	6.52	4.22	42	1 - 24

An ANOVA using the Welch approximation was conducted to compare the two alexithymia groups on the log-transformed dissociation scores. A significant omnibus effect was found, $F(1, 33.2) = 7.03, p = 0.01, \text{partial } \eta^2 = 0.12$. The group of mothers with high alexithymia ($M = 2.39, SD = 0.85$) had a significantly higher mean dissociation score than those with low alexithymia ($M = 1.88, SD = 0.53$); see Figure 4.

Figure 4. Dissociation Levels in Maternal Alexithymia Groups



Analyses of Parent-Child Hypotheses

Parent-Child Hypothesis 3.1. Child trauma history will be related to maternal trauma history.

To test the hypothesis that child betrayal trauma would be related to maternal betrayal trauma, chi-square analysis was used. A 3x3 chi-square was initially planned,

with HBT, LBT, and NT groups for each set of children and mothers, to determine whether there was an association between child and maternal experience of betrayal traumas (see Figure 5 and Table 8).

Figure 5. Maternal Betrayal Trauma History by Child Betrayal Trauma History

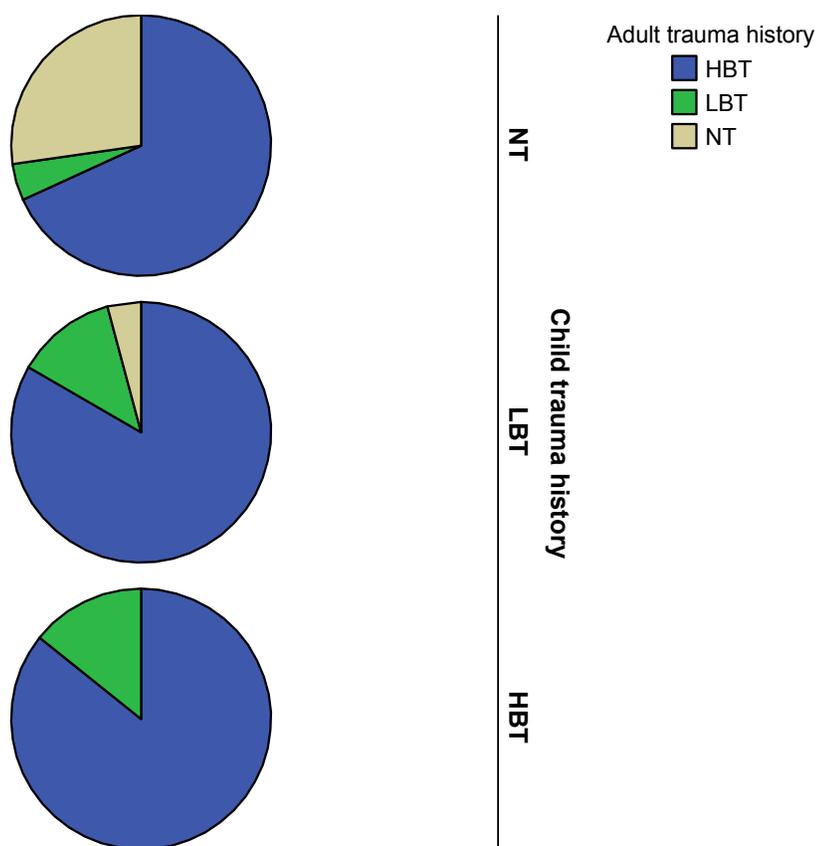


Table 8. Crosstabulation of Maternal Betrayal Trauma History by Child Betrayal Trauma History

			Child trauma history			Total
			HBT	LBT	NT	
Maternal trauma history	HBT	<i>Count</i> % within child trauma history	18 85.7%	20 83.3%	15 68.2%	53 79.1%
	LBT	<i>Count</i> % within child trauma history	3 14.3%	3 12.5%	1 4.5%	7 10.4%
	NT	<i>Count</i> % within child trauma history	0 .0%	1 4.2%	6 27.3%	7 10.4%
Total		<i>Count</i> % within child trauma history	21 100.0%	24 100.0%	22 100.0%	67 100.0%

Crosstabulation of the data showed that several cells had counts of less than five, thus a 3x3 chi-square was not feasible. A 2x2 chi-square with the Yates continuity correction for small cell sizes was instead planned. To create two-category groups, those with interpersonal traumas were compared against those with no trauma or non-interpersonal traumas. Interpersonal trauma was defined to include HBT, traumas perpetrated by a not-close other, and witnessing violent acts by or against a close or not-close other (see Table 9 for how child events were categorized; adult events were categorized in a parallel way).

The 2x2 chi-square with the Yates continuity correction revealed a significant association between maternal and child interpersonal trauma; $\chi^2(1) = 8.10, p = 0.004$, suggesting that a higher percentage of children with interpersonal trauma have parents who have had interpersonal trauma. Figure 6 and Table 10 show the distribution of the data.

Table 9. BBTS-Parent Categorization of Child Events into Interpersonal vs. Non-Interpersonal/No Trauma

Interpersonal Traumas
Your child was made to have some form of sexual contact, such as touching or penetration, by someone with whom your child was very close (such as a parent, caregiver or relative).
Your child was made to have such sexual contact by someone with whom your child was not close
Your child was deliberately attacked so severely as to result in marks, bruises, burns, blood, or broken bones by someone with whom your child was very close.
Your child was deliberately attacked that severely by someone with whom your child was not close.
Your child was emotionally or psychologically mistreated over a significant period of time by someone with whom your child was very close (such as a parent or caregiver).
Witnessed someone with whom your child was very close (such as a parent, brother or sister, caretaker, or intimate partner) committing suicide, being killed, or being injured by another person so severely as to result in marks, bruises, burns, blood, or broken bones.
Witnessed someone with whom your child was not so close undergoing a similar kind of traumatic event.
Non-interpersonal traumas/*No trauma
Been in a major earthquake, fire, flood, hurricane, or tornado that resulted in significant loss of personal property, serious injury to your child or someone your child was close to, the death of someone your child was close to, or the fear of your child's own death.
Been in a major automobile, boat, motorcycle, plane, train, or industrial accident that resulted in similar consequences.
<i>* No endorsement of any of the BBTS-Parent items</i>

Parent-Child Hypothesis 3.2. Children of revictimized mothers were expected to be more likely to experience interpersonal traumas (both witnessed traumas and traumas perpetrated against them) than children of non-revictimized mothers.

Analyses from Hypothesis 2.2 examined whether mothers who experienced high betrayal trauma in childhood and then again experienced high betrayal trauma in

Figure 6. Maternal Interpersonal Trauma History by Child Interpersonal Trauma History

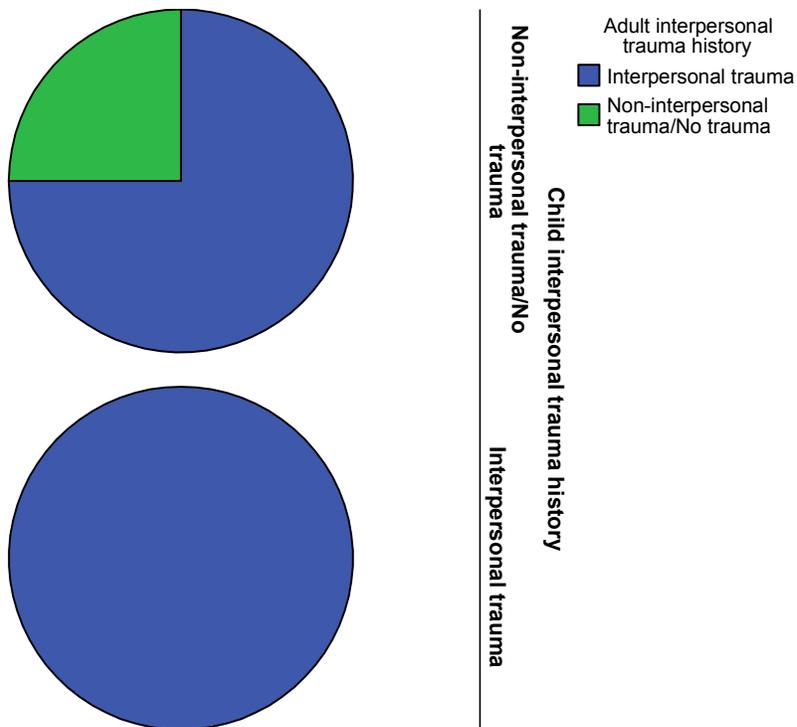


Table 10. Crosstabulation of Maternal Interpersonal Trauma History by Child Interpersonal Trauma History

			Child trauma 2 levels		Total
			Interpersonal trauma	No trauma or noninterpersonal trauma	
Maternal trauma history	Interpersonal trauma	<i>Count</i>	31	27	58
		% within child trauma	100.0%	75.0%	86.6%
	No trauma or non-interpersonal trauma	<i>Count</i>	0	9	9
		% within child trauma	.0%	25.0%	13.4%
Total		<i>Count</i>	31	36	67
		% child trauma	100.0%	100.0%	100.0%

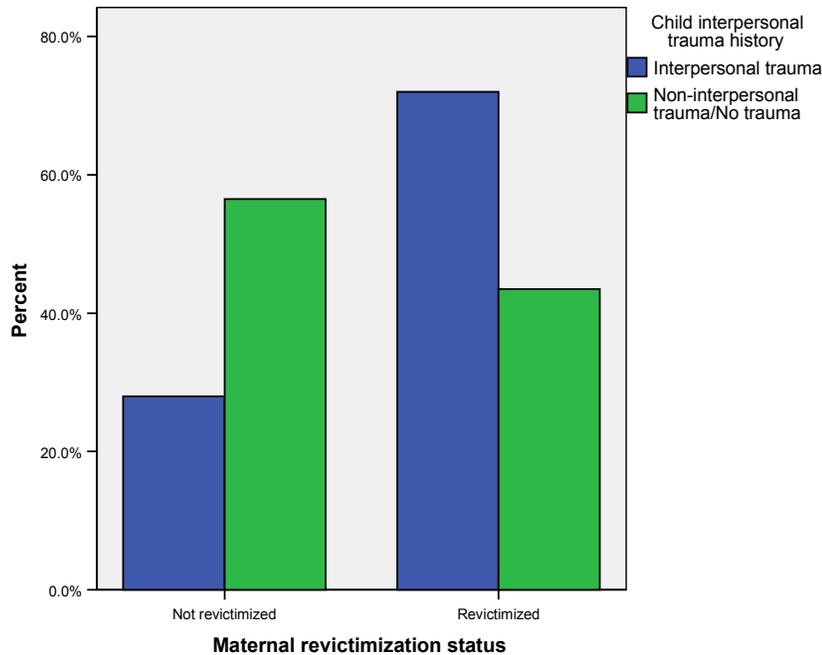
adulthood would have higher levels of dissociation than mothers who were not revictimized. It was also important to determine whether this set of mothers also might have children with higher rates of betrayal trauma, to understand whether a maternal unawareness of dangers in the environment might impact their children.

The data were therefore tested to explore whether children with revictimized mothers were more likely to experience any kind of interpersonal traumas (See Table 9 for item categorization), as mothers may be less aware of the potential for child trauma perpetration by trusted or non-trusted individuals. A significant association between maternal revictimization status and child interpersonal trauma emerged, $\chi^2(1) = 4.01, p = 0.045$ (see Table 11 and Figure 7).

Table 11. Crosstabulation of Maternal Revictimization Status by Child Interpersonal Trauma History

			Child interpersonal trauma history		Total
			Interpersonal trauma	Non-interpersonal trauma/No trauma	
Maternal revictimization status	Not revictimized	<i>Count</i> % within child interpersonal trauma history	7 28.0%	13 56.5%	20 41.7%
	Revictimized	<i>Count</i> % within child interpersonal trauma history	18 72.0%	10 43.5%	28 58.3%
Total		<i>Count</i> % within child interpersonal trauma history	25 100.0%	23 100.0%	48 100.0%

Figure 7. Maternal Revictimization Status by Child Interpersonal Trauma History



Parent-Child Hypothesis 3.3. Maternal alexithymia was expected to contribute to child dissociation, and to partially mediate an association between maternal dissociation and child dissociation.

To examine this hypothesis, several analyses were conducted:

- (a) a mediational analysis, examining whether parental alexithymia mediates the association between parent dissociation and child dissociation; and
- (b) a 2x3 factorial ANOVA, testing main effects and interaction effects for maternal alexithymia and child betrayal trauma on child dissociation.

It was hypothesized that maternal alexithymia would directly contribute to child dissociation in traumatized children, and that maternal dissociation would have indirect

effects on child dissociation via maternal alexithymia. Maternal alexithymia was thus examined as a possible mediator of the association between maternal dissociation and child dissociation. This mediation model¹ was tested using steps developed by Baron and Kenny (1986). Expected positive associations were found between maternal dissociation, maternal alexithymia, and child dissociation (see Table 12).

Table 12. Pearson Correlations for Maternal and Child Variables

Variable	Maternal dissociation	Maternal alexithymia	Child dissociation
Maternal dissociation	1.0	0.489**	0.607**
Maternal alexithymia	-	1.0	0.530**
Child dissociation	-	-	1.0

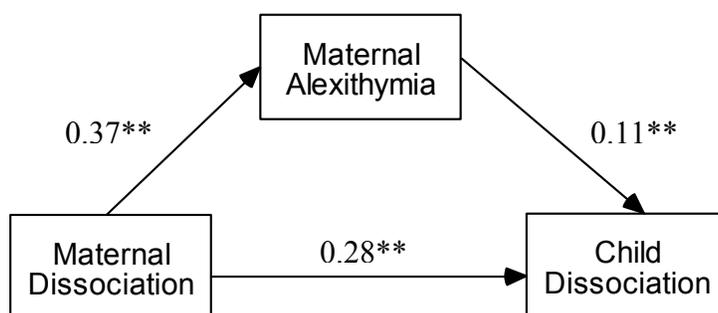
In step one of the mediation analysis, maternal dissociation significantly predicted child dissociation, $B = 0.37$, $t(64) = 6.12$, $p < 0.001$. In step two, maternal dissociation significantly predicted maternal alexithymia, $B = 0.82$, $t(64) = 4.48$, $p < 0.001$. In the final step, maternal alexithymia was evaluated as a mediator of the association between maternal dissociation and child dissociation.

Results showed that the association between maternal alexithymia and child dissociation decreased yet remained significant when maternal dissociation was also included in the model, $B = 0.28$, $t(63) = 4.24$, $p < 0.001$. This finding suggests that

¹ While this mediational model is theory based, it is important to note that evidence was also found for alternative mediational models (e.g., a model in which maternal dissociation mediates the link between maternal alexithymia and child dissociation, and models in which child dissociation was hypothesized to have a causal relationship with maternal outcomes). Thus, caution should be taken when interpreting findings, as temporal sequencing cannot be established due to the cross-sectional nature of the data.

maternal alexithymia partially mediates the association between maternal dissociation and child dissociation (see Figure 8). A Sobel test confirms partial mediation, $z = 2.40$, $SE = 0.04$, $p = 0.02$, finding a significant reduction in variance in child dissociation explained by maternal dissociation when maternal alexithymia is included in the model. Thus, maternal dissociation appears to have both direct and indirect effects on child dissociation. While parental alexithymia does not fully mediate the association between parental dissociation and child dissociation, analyses suggest it contributes to this association.

Figure 8. Mediation Model Results



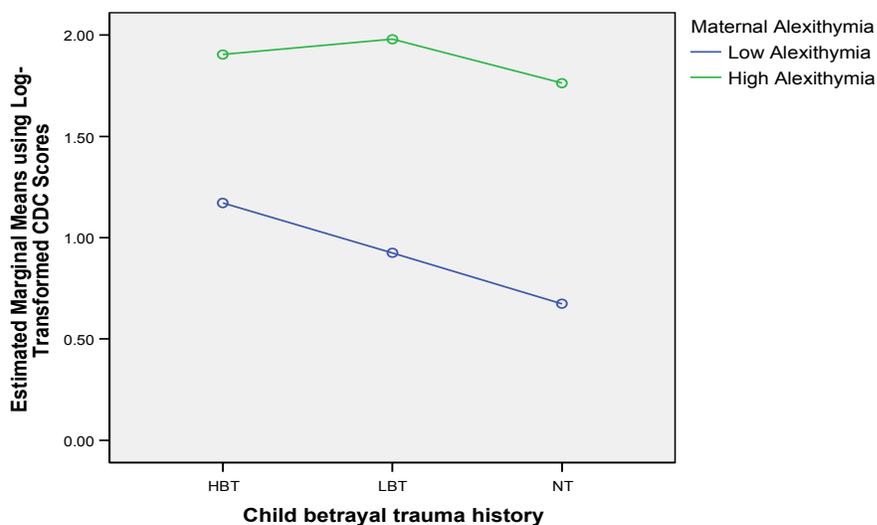
Because it was hypothesized that maternal alexithymia would contribute to child dissociation level, it was further expected that HBT children with highly alexithymic mothers would have the highest dissociation levels. A 2x3 factorial ANOVA was completed, testing main effects and interaction effects for maternal alexithymia and child betrayal trauma, with dissociation as the dependent variable. A main effect was found for maternal alexithymia, $F(1,60) = 17.55$, $p < 0.001$, partial $\eta^2 = 0.23$, suggesting that

children of highly alexithymic mothers had higher dissociation ($M = 1.88$, $SE = 0.19$, $n = 24$) than children of mothers with low alexithymia ($M = 0.92$, $SE = 0.13$, $n = 42$). No main effect was found for child trauma, $F(1,60) = 0.57$, $p = 0.57$; children with HBT ($M = 1.54$, $SE = 0.17$, $n = 21$) were not different from LBT ($M = 1.45$, $SE = 0.17$, $n = 23$) nor NT ($M = 1.22$, $SE = 0.24$, $n = 22$). The interaction effect was not significant, $F(1,60) = 0.28$, $p = 0.75$. See Table 13 for estimated marginal means for the 2 x 3 ANOVA, which is also plotted in Figure 9.

Table 13. Estimated Marginal Means for ANOVA of Child Dissociation Scores

Scale	Maternal High Alexithymia		Maternal Low Alexithymia	
	M	SE	M	SE
Child HBT	1.90	0.23	1.17	0.27
Child LBT	2.00	0.26	0.93	0.21
Child NT	1.76	0.45	0.67	0.18

Figure 9. Means Plot for 2x3 ANOVA of Log-Transformed Child Dissociation Scores



Analyses of Child Emotion Coping Strategies

In addition to the quantitative data available, we examined children's responses to vignettes describing distressing events that occurred between a fictional mother and child. Children were first asked to identify the primary emotion described in each vignette (see Table 14).

Table 14. Emotion Identification in Vignettes

Vignette	Child HBT <i>n</i> = 21	Child LBT <i>n</i> = 25	Child NT group <i>n</i> = 21	Overall <i>n</i> = 67
Distressful-Self	66.7% sad (28.6% ashamed)	88% sad	76.2% sad (14.3% ashamed)	77.6% sad (16.4% ashamed)
Distressful-Parent	81.0% sad	83.3% sad	85.7% sad	83.3% sad

Children were also asked what they might do to feel better if they were in the situation, and these responses were coded for the presence of passive versus active strategies. Chi-square analyses were conducted to determine whether the use of a particular type of emotion regulation strategy (i.e., passive or active) was related to parental alexithymia (i.e., low or high), and child betrayal trauma history (i.e., HBT, LBT, or NT).

Parent-Child Hypothesis 3.4. Children with mothers high in alexithymia will be more likely to report using passive emotion coping strategies in relation to distressful events than those with mothers low in alexithymic characteristics.

For the first set of chi-square analyses, it was expected that children with mothers high in alexithymia would report using passive (rather than active) emotion coping

strategies in relation to distressing events versus mothers with parents low in alexithymia. Chi-square Fisher's exact tests were conducted to examine this hypothesis. No difference was found for the *distressful-self* situation describing a child who dropped a Mother's Day card in the mud, $\chi^2(1) = 0.22, p = 0.64$ (see Table 15).

Table 15. Crosstabulation of Coping Strategies by Maternal Alexithymia Type for the *Distressful-Self* Vignette

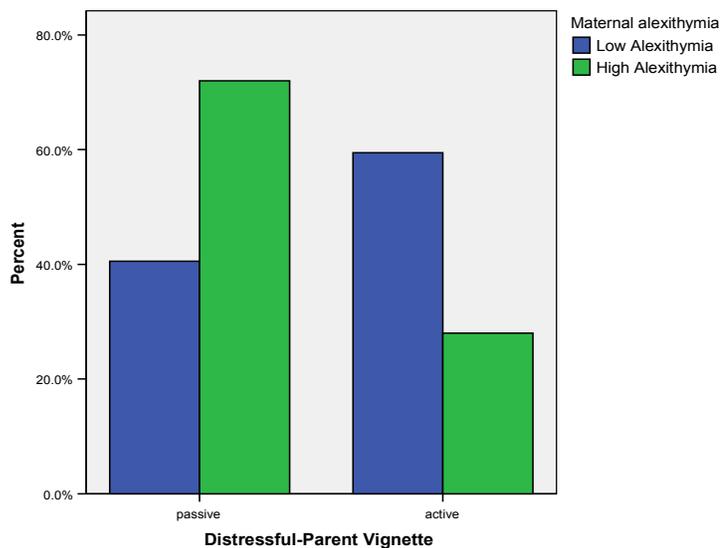
			Maternal alexithymia		Total
			Low Alexithymia	High Alexithymia	
Distressful-Self Vignette	Passive	Count	12	6	18
		% within maternal alexithymia	29.3%	24.0%	27.3%
	Active	Count	29	19	48
		% within maternal alexithymia	70.7%	76.0%	72.7%
Total	Count		41	25	66
	% within maternal alexithymia		100.0%	100.0%	100.0%

The *distressful-parent* vignette did show a significant association between type of strategy used and parental alexithymia, $\chi^2(1) = 5.93, p = 0.02$. This vignette described a mother missing her child's school play because she was stuck in traffic. When asked what they might do in the situation to make themselves feel better, children of parents with high alexithymia reported more passive strategies than active strategies, while children of parents with low alexithymia reported more active strategies than passive strategies (see Table 16 and Figure 10).

Table 16. Crosstabulation of Coping Strategies by Maternal Alexithymia Type for the *Distressful-Parent Vignette*

			Maternal alexithymia		Total
			Low Alexithymia	High Alexithymia	
Distressful-Parent Vignette	Passive	Count	15	18	33
		% within maternal alexithymia	40.5%	72.0%	53.2%
	Active	Count	22	7	29
		% within maternal alexithymia	59.5%	28.0%	46.8%
Total	Count		37	25	62
	% within maternal alexithymia		100.0%	100.0%	100.0%

Figure 10. Association between Emotion Strategy and Parental Alexithymia for the *Distressful-Parent Vignette*



Parent-Child Hypothesis 3.5. Children who have experienced traumas high in betrayal will be more likely to report using passive emotion coping strategies in relation to distressful events than (a) children experiencing traumas with lesser or no betrayal and (b) children who reportedly did not experience trauma.

It was expected that children with high betrayal trauma would be more likely to report using passive, rather than active, emotion coping strategies in relation to distressing events. No difference was found for the *distressful-self* situation, $\chi^2(2) = 2.05$, $p = 0.36$ (see Table 17).

Table 17. Crosstabulation of Coping Strategies by Child Betrayal Trauma History for the *Distressful-Self Vignette*

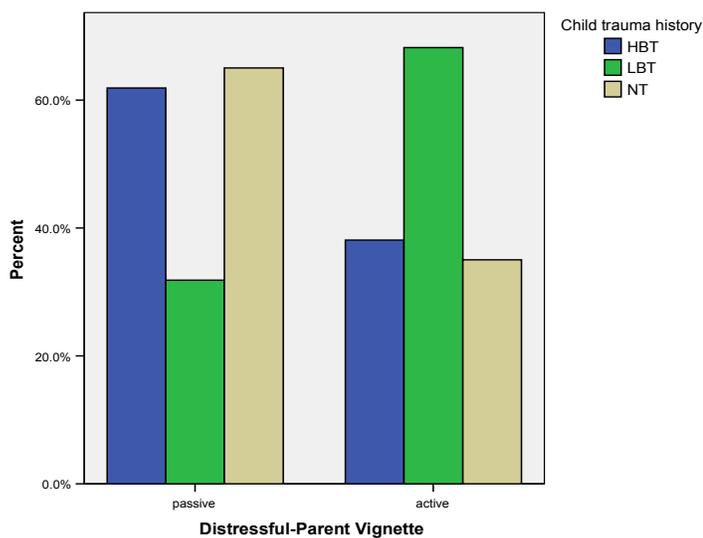
			Child trauma history			Total
			HBT	LBT	NT	
Distressful-Self Vignette	Passive	Count	8	5	5	18
		% within child trauma history	38.1%	20.0%	23.8%	26.9%
	Active	Count	13	20	16	49
		% within child trauma history	61.9%	80.0%	76.2%	73.1%
Total	Count		21	25	21	67
	% within child trauma history		100.0%	100.0%	100.0%	100.0%

A marginally significant association was found between strategy and child trauma group for the *distressful-parent* vignette, $\chi^2(2) = 5.77$, $p = 0.056$ (see Table 18 and Figure 11). Children with LBT appeared to utilize active coping strategies more so than children with either HBT or NT.

Table 18. Crosstabulation of Coping Strategies by Child Betrayal Trauma History for the *Distressful-Parent Vignette*

			Child trauma history			Total
			HBT	LBT	NT	
Distressful-Parent Vignette	Passive	Count	13	7	13	33
		% within child trauma history	61.9%	31.8%	65.0%	52.4%
	Active	Count	8	15	7	30
		% within child trauma history	38.1%	68.2%	35.0%	47.6%
Total		Count	21	22	20	63
		% within child trauma history	100.0%	100.0%	100.0%	100.0%

Figure 11. Association between Emotion Strategy and Child Trauma History for the *Distressful-Parent Vignette*



CHAPTER IV

DISCUSSION

The purpose of this dissertation was to investigate intergenerational associations between trauma, dissociation, and emotion in a cross-sectional study. By examining a sample of parents and children with and without histories of betrayal trauma, short and long term consequences on cognitive and emotion coping strategies were explored. This study provided valuable information in an important step towards future research.

In the following discussion section, I will first review the nature of the trauma experienced by the participants in the sample, followed by an examination of how dissociation may be associated with a history of high betrayal trauma. Evidence consistent with the hypothesis that dissociation from a history of childhood betrayal trauma involves a persistent unawareness of future interpersonal threats will then be considered. Next, links between maternal dissociation and maternal alexithymia, and between maternal alexithymia and child dissociation, will be explored. Finally, I will discuss findings that examine how child emotion coping strategies may be related to maternal alexithymia and child betrayal trauma history.

Betrayal Trauma History

As this study seeks to understand how high betrayal trauma by a close other may impact other processes, it is important to closely examine HBT experiences in the parent and child samples. This section will characterize the nature of trauma in the 67 participating mother-child dyads.

Mothers experienced a range of trauma, including multiple types of HBT and LBT. The experience of multiple types of maltreatment or victimization in childhood has been shown to be common (Finkelhor, Ormrod, Turner, & Hamby, 2005; Lau et al., 2005; Pears, Kim, & Fisher, 2008). Of the fifty-three mothers who reported HBT, 74.6% experienced emotional or psychological mistreatment by a close other. This type of abuse showed a great deal of overlap with the other forms of HBT that were reported, including sexual abuse by a close other (40.3%) and physical abuse by a close other (37.3%). Overall, the sample was highly traumatized, as approximately 79% of the mothers in the sample reported experiencing at least one form of HBT.

In contrast, the child sample was fairly evenly distributed among HBT, LBT, and NT groups. Approximately 31% of children in the sample were reported to have experienced high betrayal trauma. Within the HBT group, emotional abuse by a close other was experienced by the majority of children (23.9% of child sample). Only 3 children reportedly experienced physical abuse by a close other, while another 2 children reportedly experienced sexual abuse by a close other. In sum, the child HBT group was primarily characterized by the experience of emotional maltreatment.

The trauma types represented here are important to consider with regard to the results. It is possible that the selective sampling method used in this study resulted in bias. Yet it is also interesting that when we sampled for children with trauma histories, many of the parents also had histories of trauma. In future research it will be important to examine a larger sample of parents that include those without a history of betrayal trauma, as well as including children with a wider variety of high betrayal trauma experiences.

Dissociation and Betrayal Trauma

In both the parent sample and the child sample, the experience of betrayal trauma was related to higher levels of dissociation. The expected linear pattern was observed in both groups, showing that those who had experienced HBT had the highest levels of dissociation, followed by those with LBT and then NT. The patterns, however, were slightly different for parents versus children. In parents, mean dissociation scores for HBT and LBT were marginally significantly different from one another, whereas child dissociation scores in HBT and LBT were too close to be significantly different. This finding may be attributable to the types of trauma in these groups. As noted in Table 2, children in the HBT group primarily experienced emotional abuse, while the child LBT group was characterized by a mix of witnessed interpersonal violence as well as experienced non-interpersonal traumas. It is possible that the experience of HBT involving a threat to one's physical integrity (i.e., sexual abuse or physical abuse) might involve greater dissociation than betrayal trauma involving emotional abuse. Prior

research by Hulette and colleagues (Hulette, Fisher et al., 2008; Hulette, Freyd et al., 2008) and Macfie and colleagues (Macfie et al., 2001a, 2001b), suggests that maltreatment by a caregiver that includes sexual and/or physical abuse involves higher levels of dissociation than neglect or emotional abuse. With a sample of children with more diverse HBT experiences, higher levels of dissociation may have been present.

Dissociation and Unawareness of Future Threats

Dissociation was also examined as a possible explanation for a lowered maternal awareness of interpersonal threats in the environment that could lead to:

a) revictimization in mothers who had experienced HBT in childhood and b) increased child exposure to interpersonal traumas. For these analyses, a subset of mothers who had experienced HBT in childhood and were revictimized in adulthood (i.e., experienced interpersonal traumas perpetrated directly against them) was compared against a group who had experienced HBT in childhood but were not revictimized in adulthood.

Maternal Dissociation and Revictimization

Revictimized mothers were shown to have a significantly higher mean level of dissociation than non-revictimized mothers, providing support for the idea that dissociation may indicate a lower threshold of awareness for potential future perpetrators (DePrince, 2005). However, given that the current study is cross-sectional in design, there are several possible explanations for this finding. First, it may be that mothers in the revictimized group developed high dissociation following childhood HBT, levels of

which stayed high into adulthood. Retention of high levels in adulthood could explain an increased risk for interpersonal traumas. In contrast, the non-revictimized group (who also experienced childhood HBT) may have developed high levels of dissociation in childhood, with levels dropping in adulthood. An alternative explanation is that the non-revictimized group may not have developed as high levels in childhood to begin with, perhaps due to other resilience factors that were in place. A longitudinal study would allow insights into long-term pathways of dissociation.

Maternal Dissociation and Increased Child Trauma Exposure

In order to determine if maternal dissociation could lead to increased child trauma exposure, the association between child trauma history and maternal trauma history was examined. Due to limitations of the dataset, it was not possible to examine how maternal and child betrayal trauma histories were related. Instead, a 2x2 chi-square test assessed for an association between child interpersonal trauma history and adult interpersonal trauma history. Interpersonal trauma was defined to include HBT, traumas perpetrated by a not-close other, and witnessing violent acts by or against a close or not-close other. The results of the chi-square suggested that children with interpersonal trauma were more likely to have mothers with interpersonal trauma. One hundred percent of children in the sample with histories of interpersonal trauma had mothers with interpersonal traumas, while 75% of children with non-interpersonal traumas or no traumas had parents with interpersonal trauma. Given that the parent sample experienced a great deal of trauma, high percentages of mothers with interpersonal trauma histories were found in both

groups. A larger sample size would therefore be useful to get at a more accurate estimate of the relation between variables. Nonetheless, although the directionality is unclear, this analysis establishes a strong association between child and maternal interpersonal trauma histories.

A subsequent analysis examined maternal dissociation as a possible contributor to child interpersonal trauma exposure. Results discussed earlier established higher levels of dissociation among revictimized mothers than non-revictimized mothers, as they may be less aware of interpersonal threats to themselves. Similarly, maternal dissociation may lead to difficulties monitoring interpersonal threats to children. A 2x2 chi-square test confirmed an association between maternal revictimization status and child interpersonal trauma. Seventy-two percent of children who experienced interpersonal trauma had revictimized mothers, while 28% of children who experienced interpersonal trauma had non-revictimized mothers. The difference in percentages here is striking. Interestingly, 43.5% of children who experienced non-interpersonal trauma or no trauma at all also had revictimized mothers. In future research, it would be interesting to examine possible protective characteristics for this latter subgroup of children. A longitudinal design might be useful in illuminating childhood and adulthood resilience factors.

Links between Dissociation and Alexithymia

Another goal of the dissertation was to examine how dissociation might be related to alexithymia, as both constructs have been thought of as disruptions in the perception of trauma-related emotional states. Dissociation was conceptualized as leading to

alexithymia, based on the idea that alexithymia may be an extension of initial emotional numbing symptoms (Elzinga et al., 2002).

Categorical analyses revealed that the group of mothers high in alexithymic characteristics had a significantly higher mean level of dissociation than mothers low in alexithymia. Furthermore, maternal dissociation was found to significantly explain a substantial portion of variance in maternal alexithymia (22.7%). Additional regression analyses suggested that dissociation is related to the specific alexithymic characteristics of difficulty identifying feelings and difficulty describing feelings. Both of these findings are in accord with prior literature (Berenbaum & James, 1994; Goldsmith & Freyd, 2005; Grabe et al., 2000; H.J. Irwin & E.B. Melbin-Helberg, 1997; Zlotnick et al., 2001). However, dissociation was not found to be related to the alexithymic trait of externally oriented cognitive style. Perhaps this lack of association explains one distinction between the constructs of alexithymia and dissociation. It could be that when betrayal traumas are perpetrated upon individuals that require disengagement from the external environment, ensuing symptoms include dissociation and problems identifying and describing emotions. In contrast, perhaps stressful life events or traumas that do not have a betrayal component are more likely to be associated with an externally oriented cognitive style. While these suggestions are speculative, they could lead to an interesting future line of research.

Maternal Alexithymia as a Contributor to Child Dissociation

The results discussed thus far have revealed that mothers and children with a history of betrayal trauma may be more likely to develop dissociation, and that maternal dissociation is correlated with maternal alexithymia. Analyses were also completed to determine whether maternal alexithymia might be related to child dissociation symptoms.

A model was created describing maternal alexithymia as a mediator of the association between maternal dissociation and child dissociation (see Figure 1). Although this model is based on theories discussed in the literature, caution should be taken in interpretation of these findings. Kraemer and colleagues (2001) discuss problems with suggesting causal links between variables in a cross-sectional study, as one cannot infer temporal sequencing. The model also does not take into account possible additional factors, such as genetic traits, that could have direct or indirect effects on the variables in this study.

The mediational analysis suggested the following associations:

(a) Maternal dissociation was related to child dissociation. It is therefore possible that maternal dissociation and associated unawareness of threats in the environment could lead to child trauma, which in turn could lead to child dissociation. The analyses described earlier support this idea. Links were found between maternal trauma, maternal dissociation, and child trauma, and different levels of child dissociation were found with regard to child trauma type. This finding may also be explained in part by social learning theory, in that pervasive maternal dissociative behavior may be modeled by the child.

(b) Maternal dissociation was related to maternal alexithymia. Evidence consistent with this association was also described in earlier analyses (i.e., regression analysis showing prediction of alexithymia from dissociation, and group comparison analysis finding that highly alexithymic mothers showed greater dissociation than mothers low in alexithymia).

(c) Maternal alexithymia was related to child dissociation, and appeared to partially mediate the association between child and adult dissociation. This third pathway looks at the contribution of maternal alexithymia to child dissociation, to examine whether traumatized mothers who develop dissociation, and subsequently alexithymia, might display deficits in emotion socialization that could put the child at greater risk for dissociation. Maternal alexithymia does seem to be related to child dissociation. This association can be explained in several ways.

Individuals with alexithymia display a limited range of emotions (McDonald & Prkachin, 1990; G. Taylor et al., 1997). Exposure to a limited profile of maternal emotion can impact child recognition of emotion (Camras et al., 1990), as well as the child's own experience and expression of emotion (Denham et al., 2007). Furthermore, individuals high in alexithymia show deficits in accurately identifying verbal and facial affective cues in others (Lane et al., 1996; Lane et al., 2000; Mann et al., 1994; Parker, Taylor et al., 1993; G. Taylor et al., 1997; Tenedios, 2007), which suggests that alexithymic mothers may have difficulty interpreting and responding to child emotional signals. Children faced with betrayal trauma and who have mothers who are alexithymic may therefore be particularly prone to dissociation.

Alexithymia has also been associated with being discouraged to express emotions within the family setting (Berenbaum & James, 1994). Related research on meta-emotion suggests that the proportion of talk that is emotion-dismissing or emotion-coaching in nature may contribute to poorer child emotion regulation (Lunkenheimer et al., 2007). Such findings could explain why child dissociation is associated with alexithymia. Freyd (1996) suggests that dissociation is more likely to occur when there is abuse by a caregiver and when there is a lack of discussion of the abuse. This idea is based on her theory of shareability, which has to do with the way shared memories versus non-shared memories are encoded (Freyd, 1996). Events that are shared are language-based and typically encoded into formats that are explicit. Sharing information may lead knowledge to be more consciously available over time. When a child does not have the opportunity to communicate about traumatic events, memory for non-shared abuse experiences may instead be stored in a dissociated fashion. In a similar vein, Fivush (2007) discusses that narratives of past events (including stressful events) are co-constructed with the parent, as a way for children to make sense of their experiences and create meaning: “Through sharing the event with others, and reflecting on one’s own and other’s mental states, children become increasingly aware that their memory is linked to their own thoughts and emotions about the event which may be different from another’s thoughts and emotions” (Reese & Fivush, 2008, p. 206).

Based on the literature, then, one might expect that children with the experience of high betrayal trauma who also have a highly alexithymic mother would have the highest dissociation levels in the sample. Surprisingly, an interaction effect between

maternal alexithymia and child betrayal trauma was not found in a 2x3 factorial ANOVA. A main effect for child betrayal trauma also was not significant. Only the main effect for maternal alexithymia was significant. In an earlier analysis, a significant linear contrast suggested differences in dissociation level between child betrayal trauma categories; thus, it appears that this effect does not hold when maternal alexithymia is included in the model. This is an interesting finding, especially when one considers that approximately 76% of mothers in the low alexithymia group experienced HBT. Having a mother with low alexithymia may therefore be a protective factor for reducing the likelihood that a child will develop dissociation in the face of trauma, even if the mother had experienced HBT herself.

This analysis may also be explained by the types of trauma experienced by the children in the sample. Although children in the sample were evenly distributed among HBT, LBT, and NT groups, the child HBT group was characterized by a preponderance of emotional abuse and included only a few cases of physical abuse and sexual abuse. It may be that children with a highly alexithymic mother and who had experienced physical and/or sexual HBT would in fact show disproportionately high dissociation scores, and this possibility should be examined in future research.

***The Impact of Betrayal Trauma and Maternal Alexithymia
on Child Emotion Coping Strategies***

A major limitation to the study as described thus far is that the measures of trauma, dissociation, and alexithymia were completed by a single informant (the mother).

Information from the children in the sample would therefore be particularly useful in considering how dysregulation of emotion-related processes may be related to maternal alexithymia and their own experiences of betrayal trauma. Thus, child responses to vignettes describing hypothetical distressful events were examined. Dr. Jennifer Freyd and I developed these vignettes based on ones described by Zeman and Garber (1996). Although the vignettes have not been rigorously tested for construct validity, the analyses below indicate evidence for discriminant validity.

First, with regard to the *distressful-self* vignette, which describes a child dropping a Mother's Day card in the mud, the primary emotion identified by children varied as a function of betrayal trauma group. We expected that the majority of children in all groups would choose *sad* as the primary emotion felt by the fictional child. Indeed, a clear majority in each of the LBT and NT groups chose *sad* (88% and 76%, respectively). However, while 67% of children in the HBT group chose *sad* as the primary emotion, a sizeable percentage of HBT children instead chose *ashamed* as the primary emotion (29%). An explanation for this finding may be that emotionally abused children develop a very negative self-view of themselves (Briere, 1992). According to Lewis (1971), the experience of shame occurs when the self is the focus of negative evaluation. Thus, perhaps when the HBT children in the sample generate a distressful event, they readily feel shame.

The type of coping strategy (i.e., active or passive) chosen by children for the distressful situations was examined next. Based on the literature, it was expected that children of alexithymic parents were likely exposed to a limited profile of maternal

emotions, and that they would therefore choose passive coping strategies. This hypothesis was also based on prior research suggesting that children's constructive coping skills are related to maternal ability to react in a problem-focused manner to negative events (Eisenberg et al., 1996). Children who expect parental reactions that minimize or are otherwise unsupportive of their emotions have been shown to demonstrate avoidant coping as well as suppression of negative emotional responses (Eisenberg et al., 1998; Eisenberg et al., 1996; Shipman & Zeman, 2001a). Such parental reactions were thought to occur in alexithymic mothers. Evidence consistent with this hypothesis was found, as children of alexithymic mothers were more likely to use passive rather than active strategies in relation to distressful situations. This finding was associated with the *distressful-parent* vignette, suggesting that children of alexithymic mothers find it particularly difficult to resolve distress in a constructive way when the mother is the central figure generating the event. As many of the children reporting active strategies chose to discuss the event with their mothers to help themselves feel better, it may be that children of alexithymic mothers believe they cannot do so.

Type of child betrayal trauma history was also expected to relate to child emotion coping strategy. A pattern was expected in which HBT children would be most likely to use passive strategies, followed by LBT, and finally NT. This was hypothesized because the HBT group was also expected to be more highly dissociative, and dissociation was conceptualized as a dysregulation of emotion-related processes that includes emotional numbing. Emotional numbing was thought to lead to more passive emotion coping strategies, such as simply waiting for distress to subside. High levels of passive strategies

in the HBT group were also hypothesized because maltreatment in the family has been shown to contribute to deficits in maternal emotion socialization.

A marginally significant association was found between child betrayal trauma history and coping strategy for the *distressful-parent* vignette. An interesting U-shaped pattern emerged in which HBT and NT groups showed high levels of passive strategies, while LBT showed relatively low levels. Further research is needed to understand this pattern. A possible explanation for high levels in the HBT group is that the majority of these children experienced emotional trauma with a close other, for which dissociation may have been used as a way to cope. This vignette describes a situation in which a close other (the mother) causes an emotionally distressful event; such an event may generate similar passivity. In contrast, children in the NT group who described high levels of passive strategies may have done so because they are not actually very distressed. For example, some of the children in this group reported that their mom would promise to get a video of the play and/or make sure to come to the next one, and so these children may not have needed to do anything to make themselves feel better in the situation. Finally, perhaps children with LBT had low relative levels of passive strategies (and higher levels of active strategies) because they did feel distress at the event, but have a repertoire of more active ways to cope. Traumatic experiences of children with LBT were characterized by witnessed interpersonal traumas and non-interpersonal traumas, which may involve high levels of post-trauma support. Although this idea is speculative, it could mean that these children are able to call on learned strategies when something distressful occurs.

Neither of the analyses of the *distressful-self* vignette showed differences in patterns between maternal alexithymia groups or child betrayal trauma groups. These findings may be due to the nature of the vignette, as a clear solution for many of the children was to make a new Mother's Day card. However, it may also be indicative of the particular difficulties these children face with regard to caregiver-generated external events.

To clarify the nature of the findings and to better understand child emotion coping strategies across types of distressful contexts, there are several possible future directions. For instance, one could examine maternal alexithymia as a moderator of the effect of child betrayal trauma on choice of coping strategy, keeping in mind cross-sectional study limitations. It would also be interesting to repeat this study with a range of vignettes in which the parent or child generates a distressful event. In addition, responses can be coded differently, as "active" and "passive" strategies encompass a wide range of responses. Finally, as the hypothetical nature of the vignettes may be a limitation itself, future studies could use alternative measures. These may include a task in which parents generate a list of recent distressful events, after which the child is interviewed about the events, or perhaps an observational study of mothers and children interacting in a distress-provoking situation.

Limitations and Future Directions

While this study has a number of significant findings, it is also important to note general limitations, as they provide valuable information about future research directions.

One of the major limitations is the difficulty of drawing conclusions about causality because of the lack of temporal information. Because of the correlational nature of the analyses, many of the suggested explanations for the findings are speculative. However, these ideas provide the basis for subsequent studies. Future research may include prospective longitudinal studies that can examine trajectories of dissociation, such as how dissociation may be a risk factor for later trauma exposure for survivors and their children, and how dissociation may also predict alexithymia. Longitudinal research could also explore how parental alexithymia specifically contributes to problems with child cognitive and emotional coping strategies following trauma.

In future studies, it will be important to gather a sample with a more diverse history of experiences. This study was limited by a lack of mothers without a trauma history. There was therefore insufficient power to examine differences between parent betrayal trauma groups. In the child sample, the HBT group was primarily characterized by emotional abuse; it will be important to examine multiple types of child HBT in further research. In addition, although significantly different mean levels of dissociation within both child and maternal BT groups were found, there were few instances of pathological dissociation. Examining pathological dissociation may help us to more closely understand its effects.

Future research could also examine different types of samples. Although the focus of the current study was on maternal influences, paternal influences are likely to be qualitatively different and should be explored. Research could additionally focus on children with a documented history of maltreatment. Because the child trauma history in

the current study was parent-reported, it may be that mothers did not report this information accurately and/or truthfully, despite the fact that no identifying information was attached to their data. Another limitation to the trauma data that was collected is the lack of fine-grained information about the perpetrator of the traumas. The BBTS and BBTS-Parent measures provide information about whether perpetrators are close or not close to the victim. We therefore do not know definitively if the perpetrator was a parent. That said, it is possible that the lack of specific questions about identity allowed respondents to feel more comfortable revealing traumas that occurred to themselves and their children.

A different scheme for categorizing traumas could also be used in future work. In this study, traumas were categorized according to a hierarchical system (e.g., any individual with a history of HBT was placed into that group). Pears, Kim, and Fisher (2008) discuss the importance of using maltreatment groupings based on developmental stage, severity, and maltreatment type (including neglect, which we did not assess for in this study). It is additionally important to consider frequency and chronicity of trauma (Bolger & Patterson, 2001; Manly et al., 1994), as well as developmental timing of traumatic experiences (Thornberry, Ireland, & Smith, 2001). Statistical procedures such as latent class analysis (e.g., Pears et al., 2008) may be one example of how to best classify and utilize this information.

Another general limitation of the current study involves the reliance on measures that involve parent-report. If parents are highly dissociative and less attuned to the external environment, they may misreport trauma histories and symptoms for themselves

and their children. In future research it will therefore be crucial to gather additional reports from children and other relevant individuals (such as teachers), or to collect observational data. Importantly, the current study did include child reports of emotion coping strategies, with results suggesting differential profiles of coping based on maternal alexithymia type and child betrayal trauma history. These findings help to support the other conclusions drawn in the study.

Additional analyses are suggested by the research, including studies that can clarify the contribution of various other factors. Due to the relatively small sample size, the contributions of child gender and maternal socioeconomic status were not tested. We also did not test for possible covariates such as maternal psychopathology. Maternal depression has been linked to the alexithymic constructs of identifying and describing feelings (Haviland, Shaw, Cummings, & MacMurray, 1988; Hendryx, Haviland, & Shaw, 1991) as well as deficits in emotion socialization (Downey & Coyne, 1990). Maternal trauma may also lead to characteristic PTSD symptoms such as hypervigilance rather than dissociation, particularly for traumas without a betrayal component. Other possible covariates or moderators should be identified in a careful literature review and included in future studies.

This study examined environmental factors that contribute to the development of dissociation. However, research suggests that part of the variance in dissociation may be explained by genetic factors (Becker-Blease, Deater-Deckard et al., 2004). Genetic contributions towards dissociative tendencies, as well as gene-environmental interactions

should therefore be considered. It is possible that particular aspects of the family environment influence phenotypic presentation.

Despite the limitations listed above, the dissertation examines a snapshot of time that suggests that the experience of parental trauma has intergenerational effects on children. Further research can not only provide clarification of the nature of the relationships between trauma, dissociation, and emotion, but can also test interventions that may potentially reduce posttraumatic symptomatology in children.

One line of intervention research could involve teaching parents to be emotion coaches (Gottman et al., 1996) for their children. Katz and Windecker-Nelson (2006) suggest that effective meta-emotion intervention programs should include addressing parental beliefs about emotion and teaching parents ways to talk to their children about emotion. Parents with a trauma history, or who have children who experienced recent trauma, represent possible populations with which to try such an intervention. Intervention studies with parents who are highly alexithymic may instead need to target indirect parental emotion socialization first, by teaching them to identify and describe their own emotions. Finally, to target parental dissociation and unawareness for threats, intervention research could involve teaching parents monitoring skills and how to identify safe interpersonal practices.

Summary and Conclusions

To summarize, intergenerational associations between trauma, dissociation, and emotion were revealed in this study. A major goal of the dissertation was to understand

how maternal trauma may contribute to child trauma and child adaptation to trauma. Overall, this study found that mothers who have had the experience of high betrayal trauma show high levels of dissociation, and that dissociation was related to alexithymia. Furthermore, evidence was found that is consistent with hypotheses that dissociation and alexithymia may result in impairments in maternal ability to protect the child from trauma, and in impairments in the way the mother supports the child emotionally after a traumatic experience. Children with mothers who have these deficits appear to be at greater risk for dysregulation in emotion-related processes, including dissociation following betrayal trauma.

This study overall provides compelling evidence that the experience of parental trauma has intergenerational effects on children. It is an exciting step towards longitudinal studies that can provide additional clarification of the nature of the associations between these variables, as well as parent-child intervention studies that may help to prevent child trauma exposure and reduce posttraumatic symptomatology.

APPENDIX
STUDY MEASURES

Brief Betrayal Trauma Survey

For each item below, please mark one response in the columns labeled “Before Age 12,” one response in the columns labeled “Age 12 through 17,” AND one response in the columns labeled “Age 18 and Older.”

<i>Have each of the following events happened to you?</i>	Before Age 12	Age 12 through Age 17	Age 18 and older
Been in a major earthquake, fire, flood, hurricane, or tornado that resulted in significant loss of personal property, serious injury to yourself or a significant other, the death of a significant other, or the fear of your own death	YES / NO	YES / NO	YES / NO
Been in a major automobile, boat, motorcycle, plane, train, or industrial accident that resulted in similar consequences	YES / NO	YES / NO	YES / NO
Personally witnessed someone with whom you were very close (such as a parent, brother or sister, caretaker, or intimate partner) committing suicide, being killed, or being injured by another person so severely as to result in marks, bruises, burns, blood, or broken bones. This might include a close friend in combat	YES / NO	YES / NO	YES / NO
Personally witnessed someone with whom you were not so close undergoing a similar kind of traumatic event	YES / NO	YES / NO	YES / NO
Personally witnessed someone with whom you were very close deliberately attack one of your family members so severely as to result in marks, bruises, blood, broken bones, or broken teeth	YES / NO	YES / NO	YES / NO
Personally witnessed someone with whom you were not so close deliberately attack a member of your family that severely	YES / NO	YES / NO	YES / NO
You were deliberately attacked that severely by someone with whom you were very close	YES / NO	YES / NO	YES / NO
You were deliberately attacked that severely by someone with whom you were not so close	YES / NO	YES / NO	YES / NO
You were made to have some form of sexual contact, such as touching or penetration, by someone with whom you were very close	YES / NO	YES / NO	YES / NO

You were made to have such sexual contact by someone with whom you were not	YES / NO	YES / NO	YES / NO
You were emotionally or psychologically mistreated over a significant period of time by someone with whom you were very close	YES / NO	YES / NO	YES / NO
You were emotionally or psychologically mistreated over a significant period of time by someone with whom you were not	YES / NO	YES / NO	YES / NO
Experienced the death of one or more of your own children	YES / NO	YES / NO	YES / NO
Experienced a seriously traumatic event not already covered in any of these questions _____ _____	YES / NO	YES / NO	YES / NO

Brief Betrayal Trauma Survey – Parent Version

Instructions: For each of the following events, please circle your response to indicate your best estimate of how many times the event has happened to **your child**. For these questionnaires, please consider “your child” to be the child who is participating in the study today.

1. Been in a major earthquake, fire, flood, hurricane, or tornado that resulted in significant loss of personal property, serious injury to your child or someone your child was close to, the death of someone your child was close to, or the fear of your child's own death.

Never 1 time 2-5 times 6-20 times 21-100 times more than 100 times

2. Been in a major automobile, boat, motorcycle, plane, train, or industrial accident that resulted in similar consequences.

Never 1 time 2-5 times 6-20 times 21-100 times more than 100 times

3. Witnessed someone with whom your child was very close (such as a parent, brother or sister, caretaker, or intimate partner) committing suicide, being killed, or being injured by another person so severely as to result in marks, bruises, burns, blood, or broken bones.

Never 1 time 2-5 times 6-20 times 21-100 times more than 100 times

4. Witnessed someone with whom your child was not so close undergoing a similar kind of traumatic event.

Never 1 time 2-5 times 6-20 times 21-100 times more than 100 times

5. Witnessed someone with whom your child was very close deliberately attack another family member so severely as to result in marks, bruises, blood, broken bones, or broken teeth.

Never 1 time 2-5 times 6-20 times 21-100 times more than 100 times

6. Your child was deliberately attacked that severely by someone with whom your child was very close.

Never 1 time 2-5 times 6-20 times 21-100 times more than 100 times

7. Your child was deliberately attacked that severely by someone with you're your child was not close.

Never 1 time 2-5 times 6-20 times 21-100 times more than 100 times

8. Your child was made to have some form of sexual contact, such as touching or penetration, by someone with whom your child was very close (such as a parent, caregiver or relative).

Never 1 time 2-5 times 6-20 times 21-100 times more than 100 times

9. Your child was made to have such sexual contact by someone with whom your child was not close

Never 1 time 2-5 times 6-20 times 21-100 times more than 100 times

10. Your child was emotionally or psychologically mistreated over a significant period of time by someone with whom your child was very close (such as a parent or caregiver).

Never 1 time 2-5 times 6-20 times 21-100 times more than 100 times

11. Experienced the death of a sibling or parent.

Never 1 time 2-5 times 6-20 times 21-100 times more than 100 times

12. Experienced a seriously traumatic event not already covered in any of these questions.

Please describe: _____

Never 1 time 2-5 times 6-20 times 21-100 times more than 100 times

Dissociative Experiences Scale

This next section consists of twenty-eight questions about experiences that you may have in your daily life. We are interested in how often you have these experiences. It is important, however, that your answers show how often these experiences happen to you when you **are not** under the influence of alcohol or drugs. To answer the questions, please determine to what degree the experience described in the question applies to you **circle the number** to show what percentage of the time you have the experience.

Example:

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
 (never) (always)

1. Some people have the experience of driving a car and suddenly realizing that they don't remember what has happened during all or part of the trip. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

2. Some people find that sometimes they are listening to someone talk and they suddenly realize that they did not hear part or all of what was said. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

3. Some people have the experience of finding themselves in a place and having no idea how they got there. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

4. Some people have the experience of finding themselves dressed in clothes that they don't remember putting on. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

5. Some people have the experience of finding new things among their belonging that they do not remember buying. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

6. Some people sometimes find that they are approached by people that they do not know who call them by another name or insist that they have met them before. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

7. Some people sometimes have the experience of feeling as though they are standing next to themselves or watching themselves do something and they actually see themselves as if they were looking at another person. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

8. Some people are told that they sometimes do not recognize friends or family members. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

9. Some people find that they have no memory for some important events in their lives (for example, a wedding or graduation). Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

10. Some people have the experience of being accused of lying when they do not think that they have lied. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

11. Some people have the experience of looking in a mirror and not recognizing themselves. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

12. Some people have the experience of feeling that other people, objects, and the world around them are not real. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

13. Some people have the experience of feeling that their body does not seem to belong to them. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

14. Some people have the experience of sometimes remembering a past event so vividly that they feel as if they were reliving that event. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

15. Some people have the experience of not being sure whether things that they remember happening really did happen or whether they just dreamed them. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

16. Some people have the experience of being in a familiar place but finding it strange and unfamiliar. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

17. Some people find that when they are watching television or a movie they become so absorbed in the story that they are unaware of other events happening around them. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

18. Some people find that they become so involved in a fantasy or daydream that it feels as though it were really happening to them. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

19. Some people find that they are sometimes able to ignore pain. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

20. Some people find that they sometimes sit staring off into space, thinking of nothing and are not aware of the passage of time. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

21. Some people sometimes find that when they are alone they talk out loud to themselves. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

22. Some people find that in one situation they may act so differently compared with another situation that they feel almost as if they were two different people. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

23. Some people sometimes find that in certain situations they are able to do things with amazing ease and spontaneity that would usually be difficult for them (for example, sports, work, social situations, etc.). Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

24. Some people sometimes find that they cannot remember whether they have done something or have just thought about doing this (for example, not knowing whether they have just mailed a letter or have just thought about mailing it.) Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

25. Some people find evidence that they have done things that they do not remember doing. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

26. Some people sometimes find writings, drawing, or notes among their belongings that they must have done but cannot remember doing. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

27. Some people sometimes find that they hear voices inside their head that tell them to do things or comment on things that they are doing. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

28. Some people sometimes feel as if they are looking at the world through a fog so that people and objects appear far away or unclear. Circle a number to show what percentage of the time this happens to you.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Child Dissociative Checklist

Below is a list of behaviors that describe children. For each item that describes your child NOW or WITHIN THE PAST 12 MONTHS, please circle 2 if the item is VERY TRUE of your child. Circle 1 if the item is SOMEWHAT or SOMETIMES TRUE of your child. If the item is NOT TRUE of your child, circle 0.

- | | | | |
|---|---|---|---|
| 0 | 1 | 2 | 1. Child does not remember or denies traumatic or painful experiences that are known to have occurred. |
| 0 | 1 | 2 | 2. Child goes into a daze or trance-like state at times or often appears “spaced-out.” Teachers may report that he or she “daydreams” frequently in school. |
| 0 | 1 | 2 | 3. Child shows rapid changes in personality. He or she may go from being shy to being outgoing, from feminine to masculine, from timid to aggressive. |
| 0 | 1 | 2 | 4. Child is unusually forgetful or confused about things that he or she should know; for example, may forget the names of friends, teachers or other important people, loses possessions, or gets easily lost. |
| 0 | 1 | 2 | 5. Child has a very poor sense of time. He or she loses track of time, may think that it is morning when it is actually afternoon, gets confused about what day it is, or becomes confused about when something has happened. |
| 0 | 1 | 2 | 6. Child shows marked day-to-day or even hour-to-hour variations in his or her skills, knowledge, food preferences, athletic abilities; for example, changes in handwriting, memory for previously learned information such as multiplication tables, spelling, use of tools or artistic ability. |
| 0 | 1 | 2 | 7. Child shows rapid regressions in age-level behavior; for example, a twelve-year-old starts to use baby-talk sucks thumb or draws like a four-year old. |
| 0 | 1 | 2 | 8. Child has a difficult time learning from experience; for example, explanations, normal discipline or punishment do not change his or her behavior. |

- 0 1 2 9. Child continues to lie or deny misbehavior even when the evidence is obvious.
- 0 1 2 10. Child refers to himself or herself in the third person (for example, as she or her) when talking about self, or at times **insists** on being called by a different name. He or she may also claim that things that he or she did actually happened to another person.
- 0 1 2 11. Child has rapidly changing physical complaints such as headache or upset stomach. For example, he or she may complain of a headache one minute and seem to forget about it the next.
- 0 1 2 12. Child is unusually sexually precocious and may attempt age-inappropriate sexual behavior with other children or adults.
- 0 1 2 13. Child suffers from unexplained injuries or may even deliberately injure self at times.
- 0 1 2 14. Child reports hearing voices that talk to him or her. The voices may be friendly or angry and may come from “imaginary companions” or sound like the voices of parents, friends or teachers.
- 0 1 2 15. Child has a vivid imaginary companion or companions. Child may insist that the imaginary companion(s) is responsible for things that he or she has done.
- 0 1 2 16. Child has intense outbursts of anger, often without apparent cause and may display unusual physical strength during these episodes.
- 0 1 2 17. Child sleepwalks frequently.
- 0 1 2 18. Child has unusual nighttime experiences; for example, may report seeing “ghosts” or that things happen at night that he or she can't account for (such as broken toys, unexplained injuries).
- 0 1 2 19. Child frequently talks to him or herself, may use a different voice or argue with self at times.
- 0 1 2 20. Child has two or more distinct and separate personalities that take control over the child's behavior.

Toronto Alexithymia Scale-20

Using the scale indicated as a guide, please indicate how much you agree or disagree with each of the following statements by circling the corresponding number.

	Strongly disagree	moderately disagree	neither disagree nor agree	moderately agree	strongly agree
	1	2	3	4	5
1. I am often confused about what emotion I am feeling.	1	2	3	4	5
2. It is difficult for me to find the right words for my feelings.	1	2	3	4	5
3. I have physical sensations that even doctors don't understand.	1	2	3	4	5
4. I am able to describe my feelings easily.*	1	2	3	4	5
5. I prefer to analyze problems rather than to just describe them.*	1	2	3	4	5
6. When I am upset, I don't know if I am sad, frightened or angry.	1	2	3	4	5
7. I am often puzzled by sensations in my body.	1	2	3	4	5
8. I prefer to just let things happen.	1	2	3	4	5
9. I have feelings that I can't quite identify.	1	2	3	4	5
10. Being in touch with emotions is essential.*	1	2	3	4	5

	Strongly disagree	moderately disagree	neither disagree nor agree	moderately agree	strongly agree
	1	2	3	4	5
11. I find it hard to describe how I feel about people.	1	2	3	4	5
12. People tell me to describe my feelings more.	1	2	3	4	5
13. I don't know what's going on inside me.	1	2	3	4	5
14. I often don't know why I am angry.	1	2	3	4	5
15. I prefer talking to people about their daily activities rather than their feelings.	1	2	3	4	5
16. I prefer to watch "light" entertainment shows rather than psychological dramas.	1	2	3	4	5
17. It is difficult for me to reveal my innermost feelings, even to close friends.	1	2	3	4	5
18. I can feel close to someone, even in moments of silence.*	1	2	3	4	5
19. I find examination of my feelings useful in solving personal problems.*	1	2	3	4	5
20. Looking for hidden meanings in movies or plays distracts from their enjoyment.	1	2	3	4	5

* Reverse-scored items.

Subscales:

Difficulty Identifying Feelings: Items 1, 3, 6, 7, 9, 13, and 14

Difficulty Describing Feelings: Items 2, 4, 11, 12, and 17

Externally Oriented Thinking: Items 5, 8, 10, 15, 16, 18, 19, and 20

Vignette Task

Adapted from Zeman and Garber, 1996

Distressful-Self

1. Emily made a special Mother's Day project at school for her mom. On the way home from school, she accidentally dropped it in the mud and the card is ruined! She had been really looking forward to giving the project to her mom. How does Emily feel when she tells her mom?

Distressful-Parent

2. Emily is going to be in the school play. She told her mom about it and her mom was going to come. But on the day of the play, her mom is stuck in traffic and misses the whole thing. How does Emily feel?

Coding of Qualitative Responses (adapted from Shipman & Zeman, 2001)

"If this was you, and you wanted to make yourself feel better in this situation, what would you do?"

Active strategy. Response that endorses an effective constructive strategy for coping with the emotionally arousing situation, including behavioral or cognitive distraction, seeking social support, and using an expressive behavior strategy. This includes engaging the parent in a conversation about the distressing situation.

Passive strategy. Response that is passive, indicating no attempt to alter the situation (e.g., "I would just wait to feel better," or "I would just forget it.") Responses were also coded as passive if the child was unable to give an answer about the type of strategy he/she might use to feel better.

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